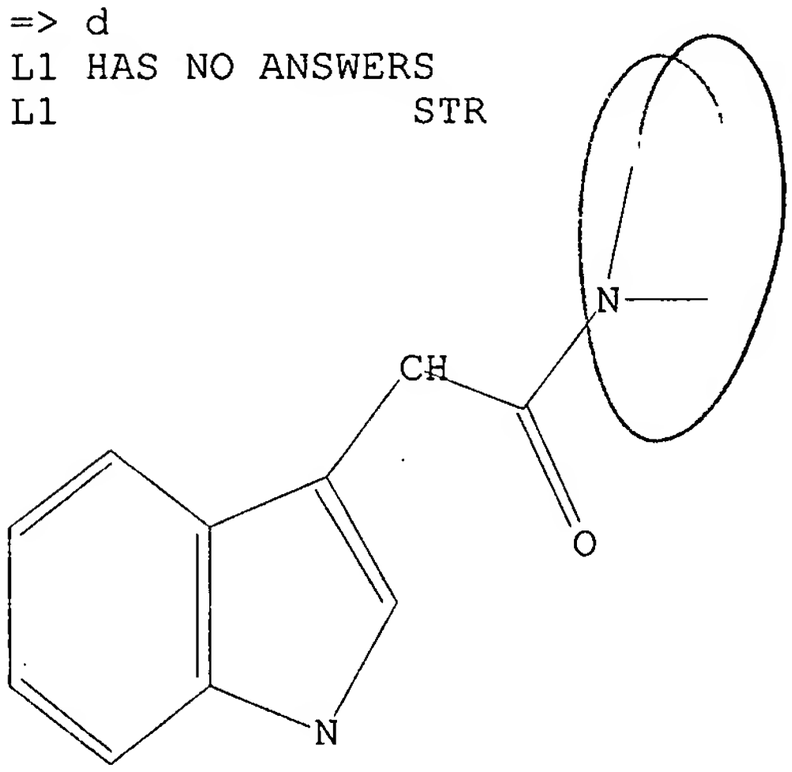
STN Structure Search

chain nodes :
10 11 13
ring nodes :
1 2 3 4 5 6 7 8 9
ring/chain nodes :
12 14 15
chain bonds :
7-10 10-11 11-12 11-13
ring/chain bonds :
12-14 12-15
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9
exact/norm bonds :
5-7 6-9 7-8 8-9 11-12 11-13 12-14 12-15
exact bonds :
7-10 10-11
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR



ring/chain formula XII - Claim 20

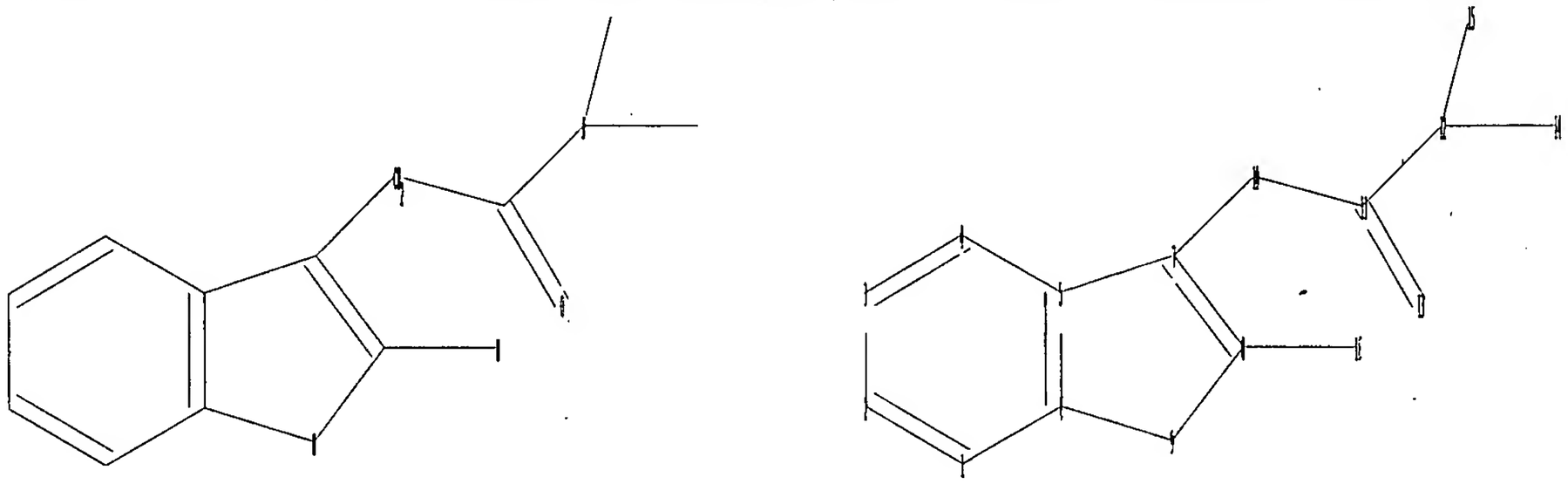
Structure attributes must be viewed using STN Express query preparation.

=> s l1 full
FULL SEARCH INITIATED 11:13:58 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 39470 TO ITERATE

100.0% PROCESSED 39470 ITERATIONS 1596 ANSWERS
SEARCH TIME: 00.00.01

L2 1596 SEA SSS FUL L1

=>
Uploading C:\Program Files\Stnexp\Queries\10539151\formula XIIa.str

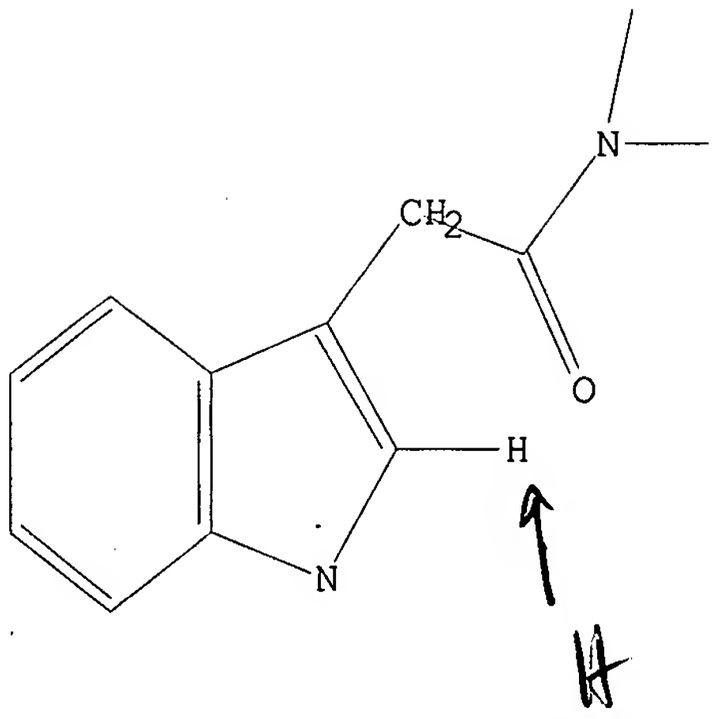


chain nodes :
10 11 13 16
ring nodes :
1 2 3 4 5 6 7 8 9
ring/chain nodes :
12 14 15
chain bonds :
7-10 8-16 10-11 11-12 11-13
ring/chain bonds :
12-14 12-15
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-9 7-8 8-9
exact/norm bonds :
5-7 6-9 7-8 8-9 11-12 11-13 12-14 12-15
exact bonds :
7-10 8-16 10-11
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS

L3 STRUCTURE UPLOADED

=> d
L3 HAS NO ANSWERS
L3 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l3 full sub=L2
FULL SUBSET SEARCH INITIATED 11:16:11 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED - 1596 TO ITERATE

100.0% PROCESSED 1596 ITERATIONS 798 ANSWERS
SEARCH TIME: 00.00.01

L4 798 SEA SUB=L2 SSS FUL L3

=> fil caplus
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	214.10	214.31

FILE 'CAPLUS' ENTERED AT 11:16:17 ON 19 FEB 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 19 Feb 2007 VOL 146 ISS 9
FILE LAST UPDATED: 18 Feb 2007 (20070218/ED)

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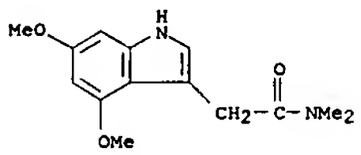
=> s l4

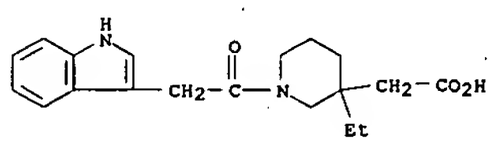
L5 309 L4

=> d ibib abs hitstr 275-309

L5 ANSWER 275 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1969:491200 CAPLUS
DOCUMENT NUMBER: 71:91200
TITLE: Synthesis and reactions of 4,6-dimethoxyindole, and unusual indole system
AUTHOR(S): Brown, Vernon H.; Skinner, W. A.; DeGraw, Joseph I.
CORPORATE SOURCE: Dep. of Pharm. Chem., Stanford Res. Inst., Menlo Park, CA, USA
SOURCE: Journal of Heterocyclic Chemistry (1969), 6(4), 539-43
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 71:91200
GI For diagram(s), see printed CA Issue.
AB A synthesis of 4,6-dimethoxyindole (I) is described. Formylation or oxalylation reactions with I gave substitution at position 7 rather than the usual 3-substitution characteristic of other indoles. A synthesis of N,N-dimethyl-4,6-dimethoxytryptamine is presented along with N.M.R. data for 3 and 7-substituted compds. in this series.
IT 23659-97-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 23659-97-4 CAPLUS
CN Indole-3-acetamide, 4,6-dimethoxy-N,N-dimethyl- (8CI) (CA INDEX NAME)

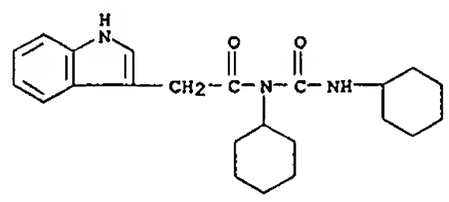


L5 ANSWER 276 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1969:422228 CAPLUS
DOCUMENT NUMBER: 71:22228
TITLE: Synthesis of quebrachamine and 3,4-dehydroquebrachamine
AUTHOR(S): Ziegler, Frederick E.; Kloek, James A.; Zoretic, Phillip A.
CORPORATE SOURCE: Yale Univ., New Haven, CT, USA
SOURCE: Journal of the American Chemical Society (1969), 91(9), 2342-6
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 71:22228
GI For diagram(s), see printed CA Issue.
AB A synthesis of quebrachamine (I) and 3,4-dehydroquebrachamine (II) has been achieved. The approach employs the alkylation of 1-benzyl-3-ethyl-1,4,5,6-tetrahydropyridine with methyl haloacetates and subsequent cyclization to a nine-membered ring in high yield with polyphosphoric acid.
IT 19611-91-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 19611-91-7 CAPLUS
CN 3-Piperidineacetic acid, 3-ethyl-1-(indol-3-ylacetyl)- (8CI) (CA INDEX NAME)



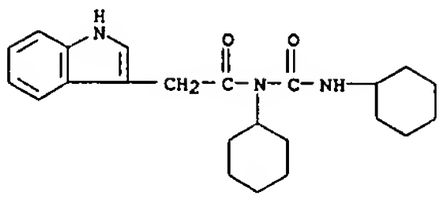
L5 ANSWER 277 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1969:96532 CAPLUS
DOCUMENT NUMBER: 70:96532
TITLE: Indole derivatives. XXXVII. Synthesis of glycerides of indole-3-alkanoic acids and O-(indol-3-ylalkyl)glycerols
AUTHOR(S): Suvorov, N. N.; Golubev, V. E.
CORPORATE SOURCE: Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Moscow, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1967), 1(8), 13-18
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB A number of indole-3-acyl- and indole-3-alkyl monoesters of glycerol were prepared Thus, to 1.61 g. indole-3-carboxylic acid in 50 cc. absolute acetone was added 1.03 g. dicyclohexylcarbodiimide (I) and 0.3 cc. dry Et3N. The solution was stirred for 72 hrs. at room temperature to give 67% indole-3-carboxylic acid anhydride (II), m. 228-30° (EtOH). To 3.04 g. II in 13.5 cc. 1,2-isopropylideneglycerol (III) was added 0.05 g. anhydrous ZnCl2 and the mixture stirred for 50 hrs. at 85° to give 1.5 g. indole-3-carboxylic acid and 38.3% IV (n = 0), m. 117-19°. Indole-3-acetic acid (8.8 g.) and 6.6 g. III dissolved in 40 cc. absolute acetone, cooled to -10°, was treated with cooling with a solution of 10.3 g. I in 20 cc. absolute acetone, 2.7 cc. dry pyridine added, and the mixture left at -10° for 48 hrs. to give, via chromatog., 44% IV (n = 1), m. 49-50° (cyclohexane), and 0.3 g. V (n = 1), m. 177-9°. Similarly obtained were the following IV and V (n, m.p. or n2D0, and % yield IV and m.p. V given): 2, 1.5339, 87, 146-7°; 3, 61-3°, 66.5, 156-7°; and 4, 1.5441, 23, 131-3° IV (n = 0), (1 g.), 5 cc. CH2Cl2, and 17 cc. 19% HCO2H solution was stirred 12 hrs. at room temperature to give the following VI (n, m.p. or n2D0, and % yield given): 0, 129-31°, 44; 1, 1.5835, 87; 2, 66-8°, 69; 3, 58-60°, 61; and 4, 68-70°, 49.5. Reaction of indole-3-carboxylic and indole-3-acetic acids with 1,3-benzylideneglycerol at -30 to -40° as above gave the following VII (no ureide was formed) (n, m.p., and % yield given): 0, 202-3°, 32.7; 1, 103-5°, 25.5; 2, 129-31°, 30; 3, 84-5°, 33; and 4, 119-21°, 57. VII in tetrahydrofuran on hydrogenation with Pd/C for 6 hrs. at room temperature gave the following VIII (n, n2D0, and % yield given); 1, 1.5525, 78; 2, 1.5725, 81; and 3, 1.5820, 72. To 0.99 g K in 60 cc. dry boiling benzene was added slowly 5.6 cc. III. The mixture was refluxed for 2-3 hrs. and then treated dropwise with 4.5 g. 2-(3-indolyl)ethyl bromide in 30 cc. benzene, and refluxed for 2 hrs. to give 32.7% IX (n = 2), n2D0 1.5537. Tosylation of γ-(3-indolyl)butanol gave 62% the corresponding tosylate, m. 62-4°. To the K salt of III was slowly added a solution of the corresponding tosylate and the mixture heated with stirring for 14 hrs. to give the following IX (n, m.p. or n2D0, and % yield given): 3, 58-60°, 32.8; and 4, 1.5475 (m. 136-7°), 7.4. The protective group of IX was removed with HCO2H to give the following X (n, m.p. or n2D0, and % yield given): 2, 57-9°, 66.5; 3, 80-84°, 77; and 4, 1.5690, 86. Rf and ir spectral data were

L5 ANSWER 277 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
given. VI (n = 2 and 3) and (n = 2, 3, and 4) had weak tuberculostatic activity against mycobacteria (strain H-37RV). VI, VIII, and X are potential plant-growth stimulants and also act on the central nervous system.
IT 3080-44-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 3080-44-2 CAPLUS
CN 1H-Indole-3-acetamide, N-cyclohexyl-N-[(cyclohexylamino)carbonyl]- (9CI) (CA INDEX NAME)



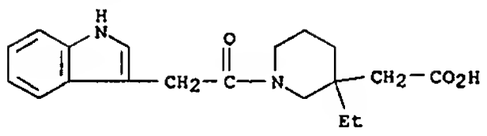
L5 ANSWER 278 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1969:77700 CAPLUS
DOCUMENT NUMBER: 70:77700
TITLE: Indole derivatives. XXVI. Synthesis of α-monoglycerides of indole-3-carboxylic acids
AUTHOR(S): Golubev, V. E.; Suvorov, N. N.
CORPORATE SOURCE: Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Moscow, USSR
SOURCE: Khim. Geterotsikl. Soedin., Sb. 1: Azotsoderzhashchie Geterotsikly (1967), 21-4. Editor(s): Hillers, S. Izd. "Zinatne": Riga, USSR.
CODEN: 20NNA2
DOCUMENT TYPE: Conference
LANGUAGE: Russian
GI For diagram(s), see printed CA Issue.
AB iso-BuOCOCl (27.3 g.) was slowly added to a Grignard solution (prepared from 28.4 g. MeI, 4.8 g. Mg, 22.4 g. indole, and 150 cc. Et2O), heated 30 min., treated with dilute AcOH at 0°, and extracted with Et2O to give 21.7 g. isobutyl indole-3-carboxylate (I), m. 106-7° (1:1 C6H6-petroleum ether). Boiling I with KOH in MeOH 4 hrs. yielded 91.5% indole-3-carboxylic acid (II), m. 219-20° (aqueous Me2CO). A mixture of 1.61 g. II, 1.03 g. Et3N, and 50 cc. Me2CO kept at room temperature 72 hrs. gave 1 g. anhydride (III) of II, m. 228-9°. A mixture of 3.04 g. III, 13.5 cc. isopropylideneglycerol, and 0.05 g. ZnCl2 stirred 50 hrs. at 85°, evaporated in vacuo, and chromatographed on silica gel gave 1.05 g. (IV, n = 0), m. 117-19° (1:1 C6H6-heptane). Treating IV (n = 0) with 19% HCO2H in CH2Cl2 at room temperature 12 hrs. gave 44% V (n = 0), m. 129-30° (CH2Cl2). A cold solution of 10.3 g. dicyclohexylcarbodiimide in 20 cc. Me2CO was added to a mixture of 8.8 g. 3-indolylacetic acid, 6.6 g. isopropylidene-glycerol, and 40 cc. Me2CO at -10° and when a precipitate started separating 2.7 cc. C5H5N was added. The mixture was kept 48 hrs. at -10°, filtered, evaporated in vacuo, dissolved in Et2O, filtered, evaporated, put on an Al2O3 column and eluted with 3:1 C6H6-Et2O. The 1st fraction was purified by mol. distillation (170-5°/10-3 mm.) yielding 44% IV (n = 1), m. 49-50°; the 2nd fraction gave VI (n = 1), m. 177-9°. Similarly were prepared the following IV (n, m.p., and % yield given): 2, - (oil), 87; 3, 61-3°, 66.5; 4, - (oil), 23; and the following VI (n and m.p. given): 2, 146-7°; 3, 156-7°. Similarly as with V (n = 0) were prepared the following V (n, reaction time in hrs., m.p., and % yield given): 1, 6, oil, 87; 2, 6, 66-8°, 69; 3, 8, 58-60°, 61; 4, 10, 68-70°, 49.5. Ir data are given.
IT 3080-44-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 3080-44-2 CAPLUS
CN 1H-Indole-3-acetamide, N-cyclohexyl-N-[(cyclohexylamino)carbonyl]- (9CI) (CA INDEX NAME)

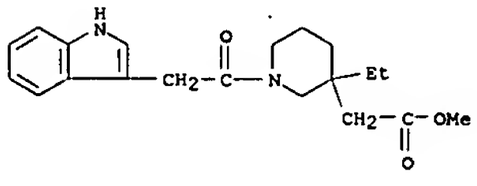
L5 ANSWER 278 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



L5 ANSWER 279 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:486747 CAPLUS
DOCUMENT NUMBER: 69:86747
TITLE: The alkylation of cyclic enamines: a synthesis of the quebrachamine skeleton
AUTHOR(S): Ziegler, F. E.; Zoretic, P. A.
CORPORATE SOURCE: Yale Univ., New Haven, CT, USA
SOURCE: Tetrahedron Letters (1968), (22), 2639-41
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Cyanoethylation of 1-piperidino-1-butene gave 77% α-(2-cyanoethyl)butyraldehyde, b10 109-11°, which was successively converted to the ethylene glycol acetal, reduced with LiAlH4, benzylated by treatment with BzH in the presence of PdC, and treated with 1N HCl for 18 hrs. to give 56% 1-benzyl-3-ethyl-1,4,5,6-tetrahydropyridine (I), b0.25 91-4°. I was acetylated with BrCH2CO2Me and reduced with NaBH4 to give a mixture (A) containing II (R = CO2Me, R1 = CO2Me) 2, II (R = Ph, R1 = CO2Me) <1, and II (R = CO2Me, R1 = Ph) (III) 22%. Hydrogenation of A over Pd-C selectively debenzylated III and the hydrogenated mixture was treated with 3-indolylacetyl chloride in a suspension of Na2CO3-CH2Cl2 to give IV (R = Me), which was saponified to IV (R = H). Heating of V with polyphosphoric acid for 20 min. at 90° gave 85% VI, m. 231-3°.
IT 19611-90-6P 19611-91-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 19611-90-6 CAPLUS
CN 3-Piperidineacetic acid, 3-ethyl-1-(indol-3-ylacetyl)-, methyl ester (8CI)
(CA INDEX NAME)

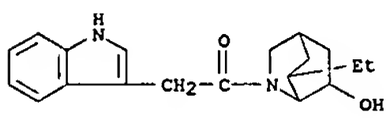
L5 ANSWER 279 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



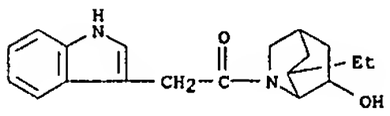


RN 19611-91-7 CAPLUS
CN 3-Piperidineacetic acid, 3-ethyl-1-(indol-3-ylacetyl)- (8CI) (CA INDEX NAME)

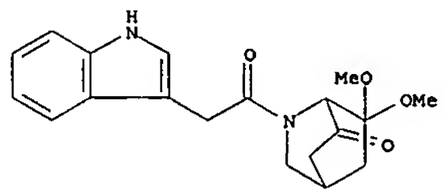
L5 ANSWER 280 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:427575 CAPLUS
DOCUMENT NUMBER: 69:27575
TITLE: A stereochemical controlled total synthesis of DL-ibogamine and DL-epiibogamine
AUTHOR(S): Nagata, Wataru; Hirai, Shoichi; Okumura, Tamotsu; Kawata, Kyozo
CORPORATE SOURCE: Shionogi Res. Lab., Shionogi and Co., Ltd., Osaka, Japan
SOURCE: Journal of the American Chemical Society (1968), 90(6), 1650-1
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB The synthesis of DL-ibogamine and DL-epiibogamine by a 1-step conversion of cis- and trans-3-ethyl-5-aminomethylcyclohexenes, prepared from 5-(hydroxymethyl)cyclohex-1-en-one and 3,5-dimethoxy-1-carboxycyclohexa-1,5-diene, to the bridged aziridines I (R = Et, R1 = H) and I (R = H, R1 = Et), resp., was described. These aziridines were then cleaved to the isoquinuclidines II (R = Et, R1 = H, R2 = β-indolylacetyl) and I (R = H, R1 = Et, R2 = β-indolylacetyl) in a key reaction step.
IT 19508-67-9P 19508-68-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 19508-67-9 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-ol, 7-ethyl-2-(indol-3-ylacetyl)- (8CI) (CA INDEX NAME)



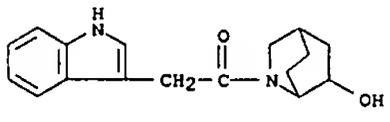
RN 19508-68-0 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-ol, 7-ethyl-2-(indol-3-ylacetyl)- (8CI) (CA INDEX NAME)



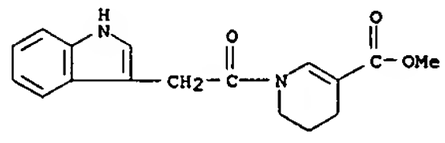
L5 ANSWER 281 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:419360 CAPLUS
DOCUMENT NUMBER: 69:19360
TITLE: Total synthesis of velbanamine
AUTHOR(S): Buechi, George; Kulsa, Peter; Rosati, Robert L.
CORPORATE SOURCE: Massachusetts Inst. of Technol., Cambridge, MA, USA
SOURCE: Journal of the American Chemical Society (1968), 90(9), 2448-9
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Successive oxygenation, reduction with NaBH4, cleavage with NaIO4, ketalization, Hofmann reaction, hydrogenolytic debenzylation, and cyclization of the isoquinuclidine (I) gave II. II was cleaved with HClO4, converted to the unstable 2-acylindole with HOAc, and successively reduced with Sn and SnCl2, oxidized, and treated with EtMgBr and LiAlH4 to give velbanamine (III).
IT 26195-95-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 26195-95-9 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-7-one, 2-(1H-indol-3-ylacetyl)-6,6-dimethoxy- (9CI) (CA INDEX NAME)



L5 ANSWER 282 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:69173 CAPLUS
DOCUMENT NUMBER: 68:69173
TITLE: New method for isoquinuclidine synthesis. Total synthesis of desethylibogamine
AUTHOR(S): Nagata, Wataru; Hirai, Shoichi; Kawata, Kyozo; Okumura, Tamotsu
CORPORATE SOURCE: Shionogi Co., Ltd., Osaka, Japan
SOURCE: Journal of the American Chemical Society (1967), 89(19), 5046-8
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB When the bridged aziridines (I) were treated with an acylating agent such as acyl halide or acid anhydride in an appropriate solvent such as ether, acetone, or pyridine, the aziridine ring cleaved to give an excellent yield of a 4:1 mixture of of the isomeric azabicyclo[2.2.2]octane (II) and azabicyclo[3.2.1]octane (III). This reaction was applied to the synthesis of desethylibogamine (IV) wherein the initial step was cleavage of I (R1 = R2 = H) with indoleacetic anhydride in acetone to give V (R = indoleacetyl).
IT 18170-38-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 18170-38-6 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-ol, 2-(indol-3-ylacetyl)- (8CI) (CA INDEX NAME)



L5 ANSWER 283 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:68841 CAPLUS
DOCUMENT NUMBER: 68:68841
TITLE: Tetrahydropyridines
AUTHOR(S): Wenkert, Ernest; Dave, K. G.; Haglid, Frank; Lewis, Ronald Gene; Oishi, Takeshi; Stevens, Robert Velman; Terashima, Masanao
CORPORATE SOURCE: Indiana Univ., Bloomington, IN, USA
SOURCE: Journal of Organic Chemistry (1968), 33(2), 747-53
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A variety of β-acylpyridines and their N-alkyl salts are converted to 3-acyl-2-piperideines on Pd-catalyzed hydrogenation. Condensation of some of the products with indole derivs. is described. The nature of the ions produced on exposure of the tetrahydropyridines to protic acids and the isolation of protic salts are discussed. Attempts of the base-promoted isomerization of 3-piperideines into their Δ2 isomers are portrayed. 36 references.
IT 15083-67-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 15083-67-7 CAPLUS
CN Nicotinic acid, 1,4,5,6-tetrahydro-1-(indol-3-ylacetyl)-, methyl ester (8CI) (CA INDEX NAME)



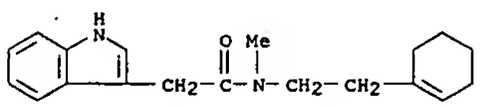
L5 ANSWER 284 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1968:49467 CAPLUS
DOCUMENT NUMBER: 68:49467
TITLE: trans-Indolomorphinans
INVENTOR(S): Shavel, John, Jr.; Morrison, Glenn Curtis
PATENT ASSIGNEE(S): Warner-Lambert Pharmaceutical Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3314964		19670418	US 1964-338028	19640116
FR 4378			FR	
GB 1095912			GB	
GB 1095913			GB	

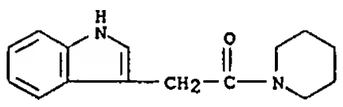
GI For diagram(s), see printed CA Issue.
AB Continuation-in-part. The title compds. (Ia) were prepared by a six-step synthesis and are of interest as analgesics, antitussives and antiinflammatory agents. Thus, a mixture of 139 g. N-methylcyclohexenylethylamine and 175 g. indole-3-acetic acid was heated 44 hrs. at 175° to give 46% N-[2-(1-cyclohexenyl)ethyl]-N-methylindole-3-acetamide (I), m. 123-4°. I (10 g.) was treated with (40 ml.) POCl3 to effect ring closure and gave 20% 4a-chloro-2,3,4,4a,5,6,7,8-octahydro-1-(indol-3-ylmethyl)-2-methylisoquinoline (II), m. 128-32°. Alternately, II could be reduced in situ as follows: 76.8 g. amide I was treated with 300 ml. POCl3, after 20 hrs. the mixture was poured onto 3 l. Et2O, the solids were removed, washed with 1 l. Et2O and dissolved in 450 ml. EtOH. After neutralization with 280 ml. 10% NaOH the pH was adjusted to 3 with 20% HCl and the mixture treated with a total of 22.5 g. NaBH4 to effect reduction On work-up there was obtained 49% 4a-chlorodecahydro-1-(indol-3-ylmethyl)-2-methylisoquinoline (III), m. 157-8°. KOH-MeOH (2.25 g. in 22.5 ml.) treatment of 3.0 g. III gave a crude product (90%). Chromatog. on alumina led to 4,5,6,7-tetrahydro-10-methylspiro[[3aH - 3,7a]iminoethanoindan - 1,3'-indole], (IV), (10%), m. 100-1°. Crude IV was converted by EtOH-HCl to trans-2-methylcyclohex[j]indolo[2,3-f]morphan-HCl (Ia, R = H), (68%), m. 335° (decomposition); free base, m. 137-8°, Also prepared was Ia (R = Me) as HBr salt, m. 235-6°.
IT 13135-21-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 13135-21-2 CAPLUS
CN Indole-3-acetamide, N-[2-(1-cyclohexen-1-yl)ethyl]-N-methyl- (8CI) (CA INDEX NAME)

L5 ANSWER 284 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 285 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1967:464602 CAPLUS
DOCUMENT NUMBER: 67:64602
TITLE: Alternate precursors in biogenetic-type syntheses. I. The synthesis of cyclohex[j]indolo[2,3-f]morphan
AUTHOR(S): Morrison, Glenn Curtis; Waite, Ronald O.; Serafin, Florence; Shavel, John, Jr.
CORPORATE SOURCE: Warner-Lambert Res. Inst., Morris Plains, NJ, USA
SOURCE: Journal of Organic Chemistry (1967), 32(8), 2551-5
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB cis-Cyclohex[j]indolo[2,3-f]morphan (I) was obtained by a Grewe-type (G., et al., CA 44: 1994f) synthesis. The N-methylated trans isomer II was obtained from 4a-chloro-2,3,4,4a,5,6,7,8-octahydro-1-(indol-3-ylmethyl)-2-methylisoquinoline (III) by reduction, intramol. halogen displacement, and a Plancher rearrangement. III arose from the Bischler-Napieralski cyclization of N-[2-(1-cyclohexenyl)ethyl]-N-methylindole-3-acetamide. Both isomers were degraded to 11-methylbenzo[a]carbazole. 19 references.
IT 13135-21-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 13135-21-2 CAPLUS
CN Indole-3-acetamide, N-[2-(1-cyclohexen-1-yl)ethyl]-N-methyl- (8CI) (CA INDEX NAME)



L5 ANSWER 286 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1967:403176 CAPLUS
DOCUMENT NUMBER: 67:3176
TITLE: Conversion of tetrahydro-β-carbolines into 2-acylindoles
AUTHOR(S): Dolby, Lloyd J.; Gribble, Gordon W.
CORPORATE SOURCE: Univ. of Oregon, Eugene, OR, USA
SOURCE: Journal of Organic Chemistry (1967), 35(2), 1391-8
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 67:3176
GI For diagram(s), see printed CA Issue.
AB The 2-acylindole, 5-methyl-12b-oxo-5,12b-seco-1,2,3,4,6,7,12,12b-octahydroindolo[2,3-a]quinolizine (I), was synthesized. The mechanism of the previously reported C-D ring cleavage of dihydrocorynantheine is discussed. I was also prepared by periodic acid oxidation of the tricyclic amine, 5-methyl-5,12b-seco-1,2,3,4,6,7,12,12b-octahydroindolo[2,3-a] quinolizine. The reaction of tricyclic ketone I with nucleophiles was examined as a model for the suggested biogenesis of echitamine. 25 references.
IT 7774-14-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 7774-14-3 CAPLUS
CN Piperidine, 1-(1H-indol-3-ylacetyl)- (9CI) (CA INDEX NAME)



L5 ANSWER 287 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:490667 CAPLUS
DOCUMENT NUMBER: 65:90667
ORIGINAL REFERENCE NO.: 65:16972h,16973a-b
TITLE: trans- Cyclohex[j]indolo [2,3 - f]morphans
INVENTOR(S): Shavel, John, Jr.; Morrison, Glenn C.
PATENT ASSIGNEE(S): Warner-Lambert Pharmaceutical Co.
SOURCE: 6 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

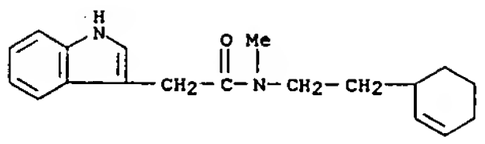
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1434197		19660408	FR	
PRIORITY APPLN. INFO.:			US	19640116

AB The title compds. are prepared and can be used as analgesic agents and as sedatives. Thus, a mixture 139 g. N-methylcyclohexenylethylamine and 175 g. indole-3-acetic acid is heated 48 h. under N to give 46 % N- [2-(1-cyclohexyl)ethyl]-N-methylindole-3-acetamide (I), m. 123-4° (C6H6), λEtOH 220 mμ (ε 37,500). A solution of 10 g. I and 40 mL. POCl3 is kept 28 h. to give 20% 4a-chloro-2,3,4,4a,5,6,7,8-octahydro-1-(indol-3-yl-methyl)-2-methylisoquinoline, m. 128-32° (C6H6-hexane), λEtOH 217 mμ (ε 31,000). Similarly pred. is 4a-chlorodecahydro-1-(indol-3-ylmethyl)-2-methylisoquinoline (II), m. 156-8°, λEtOH 222 mμ (ε 31,900). A mixture of 3 g. II, 2.25 g. KOH, and 22.5 mL. MeOH is refluxed 20 h. to give 4,5,6,7-tetrahydro-10-methylspiro[3aH-3,7a]iminoethanoindan-1,3'-indole] (III), m. 100-1° (hexane), λEtOH 220 mμ (ε 20,800). A solution of III (prepared from 36 g. II) in 210 mL. 5% HCl (EtOH) is refluxed 5 min. to give 68% trans-2-methylcyclohex[j]indolo[2,3-f]morphan-HCl (IV.HCl), m. 335° (decomposition) (EtOH), λEtOH 224 mμ (ε 36,000). IV.HCl is treated with NaHCO3 to give IV, m. 137-8° (hexane) λEtOH 228 mμ (ε 35,800). A mixture of 2 g. IV, 2 g. 55% NaH dispersion, 20 mL. Me2CO3, and 300 mL. THF is refluxed 18 h. to give 97% trans-2,6-dimethylcyclohex[j]indolo[2,3-f]morphan, HBr salt m. 225-36° (EtOH-EtOAc), λEtOH 227 mμ (ε 39,300).

IT 7670-44-2P, Indole-3-acetamide, N-[2-(2-cyclohexen-1-yl)ethyl]-N-methyl-
RL: PREP (Preparation)
(preparation of)

RN 7670-44-2 CAPLUS
CN Indole-3-acetamide, N-[2-(2-cyclohexen-1-yl)ethyl]-N-methyl- (7CI, 8CI) (CA INDEX NAME)

L5 ANSWER 287 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

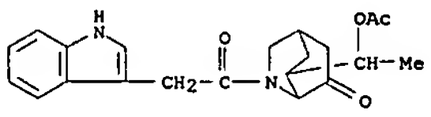


L5 ANSWER 288 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:429635 CAPLUS
DOCUMENT NUMBER: 65:29635
ORIGINAL REFERENCE NO.: 65:5500d-e
TITLE: Total synthesis of Iboga alkaloids
AUTHOR(S): Buechi, G.; Coffen, D. L.; Kocsis, Karoly; Sonnet, P. E.; Ziegler, Frederick E.
CORPORATE SOURCE: Massachusetts Inst. of Technol, Cambridge
SOURCE: Journal of the American Chemical Society (1966), 88(13), 3099-109
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English

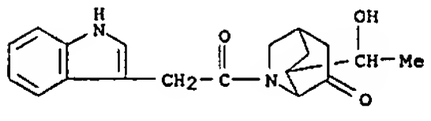
AB The 2 alkaloids, ibogamine and ibogaine, have been prepared in the form of their racemates from nicotinamide by a 13-step sequence.

IT 2288-35-9P, 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-, acetate (ester) 6516-62-7P, 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-
RL: PREP (Preparation)
(preparation of)

RN 2288-35-9 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-, acetate (ester), stereoisomer (8CI) (CA INDEX NAME)



RN 6516-62-7 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)- (7CI, 8CI) (CA INDEX NAME)

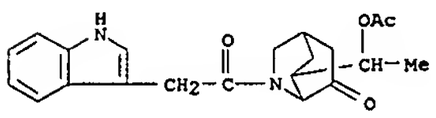


L5 ANSWER 289 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1966:429634 CAPLUS
DOCUMENT NUMBER: 65:29634
ORIGINAL REFERENCE NO.: 65:5500a-d
TITLE: New alkaloids from Vinca herbacea
AUTHOR(S): Ognyanov, I.; Dalev, P.; Duchevska, Kh. B.; Mollow, N.
SOURCE: Rivista Italiana Essenze, Profumi, Piante Officinali, Aromi, Saponi, Cosmetici (1965), 47(11), 600-2
CODEN: RPOSAA; ISSN: 0370-677X
DOCUMENT TYPE: Journal
LANGUAGE: Italian

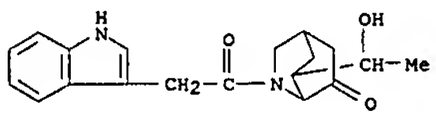
AB From Et2O-soluble fractions (100 g. in Et2O) of V. herbacea (340 g. from 75 kg. dried material extracted with EtOH in a Soxhlet apparatus) were isolated 1 fraction of basic alkaloid by precipitating with 2% H3PO4 (1500 cc.) brought to pH 6 with NH4OH (fraction A, 53.2 g.) and than to pH 10.0 with NH4OH (fraction B, 22.6 g.). Fraction A (40 g. in 200 cc. C6H6) was chromatographed on Al2O3 to give 7 gradient elution fractions as follows: Fraction 1, C6H6, 7000 cc., 10.55 g. amorphous (I); 2, C6H6 + 5% Et2O, 2000 cc., 0.20 g. amorphous material; 3, C6H6 + 5% Et2O, 2000 cc., 0.8 g. oil + reserpine; 4, C6H6 + 10% Et2O, 12,000 cc., 4.3 g. amorphous substance; 5, C6H6 + 20% Et2O, 4000 cc., 0.6 g. oil + II; 6, C6H6 + 20% Et2O, 2800 cc., 1.2 g. oil + III; C6H6 + 20% Et2O, 4000 cc., 3.0 g. oil + IV. These products were further examined by paper chromatography [System 1, Schleicher and Schuell 2043a impregnated with 0.2M NaH2PO4 and irrigated with 9:1 EtOAc-BuOH; System 2, unimpregnated paper irrigated with BuOH saturated with 0.2M KH2PO4 (thin-layer chromatography); System 3, unbound Al2O3 inactivated by 7% NH4OH solution with Et2O eluent]. Comparative Rf values were tabulated (System and Rf values for I, reserpine, II, III, and IV given): 1, 0.90, 0.87, -, 0.90, 0.86; 2, 0.75, 0.74, -, 0.79, 0.69; 3, 0.93, 0.87, 0.46, 0.30, 0.27. I was obtained in yellow needles as the perchlorate, 229-31°, analysis, C, 56.34; H, 5.83; N, 5.92; Cl, 7.89; MeO, 7.51; calculated for C21H21O2N2 (OMe)HClO4. Neutralization with NH4OH, extraction with Et2O, and precipitation gave an amorphous yellow substance; analysis, C, 72.65; H, 6.70; N, 7.60; calculated for C22H24O3N2; equivalent weight, 372,3. by potentiometric titration with HClO4 in HCONMe2 (calculated, 364.33). From fraction 3 was isolated a quantity of crystals identical with authentic reserpine. III from fraction 6 was collected as green plates 208-10°, [α]D -111.0° (C 2.34, C5H5N); analysis, C, 64.57; H, 6.42; N, 6.43; MeO, 21.47;. calculated for C20H19O3N2(MeO)3; equivalent weight, 424 by the above method (calculated 428.47). Fraction 7 (3.00 g.) was rechromatographed on Al2O3 to give 1.70 g. 190-2°, [α]D -108.1° (c 1, C5H5N); analysis, C, 64.64; H, 6.55; N, 6.78; MeO, 21.91; calculated for C20H19O3N2(MeO)3; equivalent weight, 425.9 by the above method (calculated, 428.47).

IT 2288-35-9P, 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-, acetate (ester) 6516-62-7P, 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-

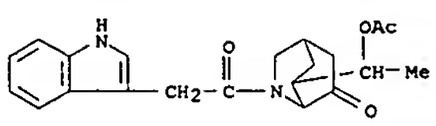
L5 ANSWER 289 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RL: PREP (Preparation)
(prepn. of)
RN 2288-35-9 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-, acetate (ester), stereoisomer (8CI) (CA INDEX NAME)



RN 6516-62-7 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-(7CI, 8CI) (CA INDEX NAME)

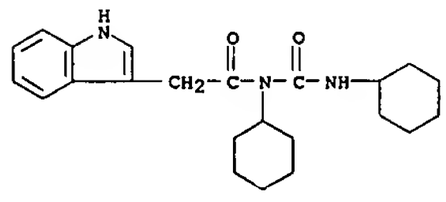


L5 ANSWER 290 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

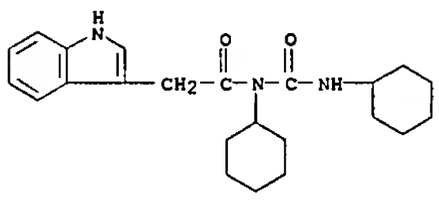


L5 ANSWER 290 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1965:424346 CAPLUS
DOCUMENT NUMBER: 63:24346
ORIGINAL REFERENCE NO.: 63:4353a-f
TITLE: The total synthesis of (±)-ibogamine and of (±)-epiibogamine
AUTHOR(S): Buechi, G.; Coffen, D. L.; Kocsis, Karoly; Sonnet, P. E.; Ziegler, Frederick E.
CORPORATE SOURCE: Massachusetts Inst. of Technol., Cambridge
SOURCE: Journal of the American Chemical Society (1965), 87(9), 2073-5
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB 3-Carbamoyl-N-benzylpyridinium chloride (Ia) was reduced with NaBH4 in aqueous Na2CO3 to give a mixture of the 1,6-dihydro- (I), 1,2-dihydro-, and a small amount of the 1,2,5,6-tetrahydro derivative of Ia, m. 118-20°. The crude mixture was treated with AcCH:CH2 in hot CHCl3; only I reacted to give 13% II (R = Ac) (III). III was reduced by NaBH4 in MeOH to give a mixture of which II (R = MeCHOH), the major component, was treated with NaOCl in KOH-MeOH to give 42% IV. IV was hydrolyzed with 6N H2SO4 and treated with Ac2O-C5H5N to give 94% V (R = CH2Ph), which was hydrogenated in HCl-MeOH containing Pd-C to give the debenzyl derivative The latter compound was made to react with β-indolylacetyl chloride in CH2Cl2 containing Et3N to yield V (R = β-indolylacetyl), which was refluxed with p-MeC6H4SO3H in AcOH to give VI (R = OAc). This compound was not isolated but refluxed with AcOH-Zn to give 68% VI (R = H) (VII). VII in tetrahydrofuran was reduced at room temperature with LiAlH4 to give 74% VIII (R = H, OH), which was oxidized with dicyclohexyl-carbodiimide and Me2SO to give 50% VIII (R = O) (IX). Treatment of IX with NaOMe-MeOH gave X. X was reduced with Zn-AcOH to give a mixture of epimers XI (R1 or R2 = H; R2 or R1 = Ac), Wolff-Kishner reduction of which gave (±)-ibogamine (XI, R1 = Et, R2 = H), and (±)-epiibogamine (XI, R1 = H, R2 = Et). The identity of the synthetic and natural products was determined by comparison of ir and mass spectra and by thin-layer chromatography.
IT 2288-35-9P, 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-, acetate (ester)
RL: PREP (Preparation)
(preparation of)
RN 2288-35-9 CAPLUS
CN 2-Azabicyclo[2.2.2]octan-6-one, 7-(1-hydroxyethyl)-2-(indol-3-ylacetyl)-, acetate (ester), stereoisomer (8CI) (CA INDEX NAME)

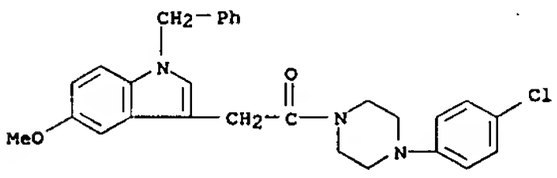
L5 ANSWER 291 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1965:44162 CAPLUS
DOCUMENT NUMBER: 62:44162
ORIGINAL REFERENCE NO.: 62:7850g-h
TITLE: D-Glucuronic esters. I. Synthesis of methyl 2,3,4-tri-O-acetyl-1-O-acyl-D-glucopyranuronates by use of carbodiimide
AUTHOR(S): Pravdic, N.; Keglevic, D.
CORPORATE SOURCE: Inst. "Ruder Boskovic,", Zagreb, Yugoslavia
SOURCE: Journal of the Chemical Society (1964), (Nov.), 4633-5
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Treatment of I with RCO2H in the presence of dicyclohexylcarbodiimide and C5H5N gave good yields of II. In most cases mixts. of anomers were obtained. The effect of C5H5N on the formation of II was studied. In C5H5N-catalyzed reactions mutarotation of I always preceded esterification. Without C5H5N, products enriched in the β-D form were obtained, i.e. the equatorial OH group of I is more reactive than the axial one.
IT 3080-44-2P, Urea, 1,3-dicyclohexyl-1-(indol-3-ylacetyl)-
RL: PREP (Preparation)
(preparation of)
RN 3080-44-2 CAPLUS
CN 1H-Indole-3-acetamide, N-cyclohexyl-N-[(cyclohexylamino)carbonyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 292 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1965:44161 CAPLUS
DOCUMENT NUMBER: 62:44161
ORIGINAL REFERENCE NO.: 62:7850f-g
TITLE: Synthesis of disaccharides with mercuric salts. II. Synthesis of 2-O-α-D-glucopyranosyl-D-glucose (kojibiose)
AUTHOR(S): Matsuda, Kazuo
CORPORATE SOURCE: Tohoku Univ., Sendai, Japan
SOURCE: Nippon Nogei Kagaku Kaishi (1959), 33(8), 714-18
CODEN: NNKKAA; ISSN: 0002-1407
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB cf. CA 59, 6494h. See CA 52, 7159e.
IT 3080-44-2P, Urea, 1,3-dicyclohexyl-1-(indol-3-ylacetyl)-
RL: PREP (Preparation)
(preparation of)
RN 3080-44-2 CAPLUS
CN 1H-Indole-3-acetamide, N-cyclohexyl-N-[(cyclohexylamino)carbonyl]- (9CI) (CA INDEX NAME)

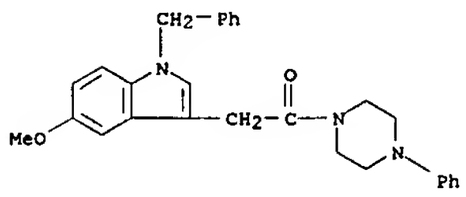


L5 ANSWER 293 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1965:36828 CAPLUS
DOCUMENT NUMBER: 62:36828
ORIGINAL REFERENCE NO.: 62:6485a-c
TITLE: Synthesis of some N-phenylpiperazine derivatives as potential central nervous system depressants
AUTHOR(S): Chou, Chi-Ting; Chi, Ju-Yun
CORPORATE SOURCE: Acad. Sinica, Shanghai, Peop. Rep. China
SOURCE: Yaoxue Xuebao (1964), 11(10), 692-9
CODEN: YHHPAL; ISSN: 0513-4870
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB A series of indolylalkylphenylpiperazines was recently reported to be active central nervous system depressants. Variation in the length of the alkyl chains and change of substituents on the indole moiety or on the Ph group influenced only the strength and specificity of the activity. However, removal of the Ph group or replacement of it by an alkyl or arylalkyl group caused the loss of almost all of the central activities. It would seem possible to get even more favorable central nervous system depressants on further modification of the indole moiety, as long as the N-Ph group was retained. A number of N-phenyl- and -chlorophenylpiperazine derivs., the substituents on the other N being either isosteres of indole or pharmacol. interesting groups, were synthesized. These compds. were synthesized either by condensation of appropriate halides with N-phenyl-or-chlorophenylpiperazine, or by reduction of the corresponding amides by means of LiAlH4. The amides were in turn prepared by the interaction of acyl chlorides or acyl azides and N-phenyl- or -chlorophenylpiperazine, resp. Two of the amides were afforded on application of the Arndt-Eistert reaction. Two of these compds., 1-(3,4,5-trimethoxyphenethyl)-4-phenylpiperazine and 1-(3,4,5-trimethoxyphenethyl)-4-(p-chlorophenyl)piperazine exhibited marked tranquilizing activity in preliminary pharmacol. examns.
IT 1109-25-7P, Piperazine, 1-[(1-benzyl-5-methoxyindol-3-yl)acetyl]-4-(p-chlorophenyl)- 1258-69-1P, Piperazine, 1-[(1-benzyl-5-methoxyindol-3-yl)acetyl]-4-phenyl-
RL: PREP (Preparation)
(preparation of)
RN 1109-25-7 CAPLUS
CN Piperazine, 1-[(1-benzyl-5-methoxyindol-3-yl)acetyl]-4-(p-chlorophenyl)- (7CI, 8CI) (CA INDEX NAME)



RN 1258-69-1 CAPLUS
CN Piperazine, 1-[(1-benzyl-5-methoxyindol-3-yl)acetyl]-4-phenyl- (7CI, 8CI)

L5 ANSWER 293 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
(CA INDEX NAME)



L5 ANSWER 294 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1964:425461 CAPLUS
DOCUMENT NUMBER: 61:25461
ORIGINAL REFERENCE NO.: 61:4374g-h,4375a-h,4376a-h,4377a
TITLE: Substituted ω-(piperazinyl)alkylindoles
INVENTOR(S): Archer, Sydney
PATENT ASSIGNEE(S): Sterling Drug Inc.
SOURCE: 21 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3135794		19640602	US 1960-66396	19601018
PRIORITY APPLN. INFO.:			US	19601018

GI For diagram(s), see printed CA Issue.
AB Compds. having the general formula Ia, having tranquilizing activity, where R1, R2, R3, R4, R5, R6, and X can be widely varied, were prepared by several routes. Thus, (3-indolyl)glyoxalyl chloride (I) was treated with an appropriately substituted piperazine to give II which was reduced with LiAlH4 in tetrahydrofuran (THF) to III. II and III are tabulated: II, , , III; , , m.p., , , m.p.; R1/R2, R3/R4, (°C.), X, Salt, (°C.); H/Me, H/H, , H, 2 HCl, 279.0-83.8; H/CH2CH2OH, H/H, , H, 2, HCl, 266.8-71.4, H/2-MeC6H4, H/H, , H, , 124.2-126.4; H/3-MeC6H4, H/H, , H, , 163.8-6.2; H/2-MeOC6H4, H/H, , H, (IV), 111.4-14.2; H/4-MeOC6H4, H/H, 243-5, H, , 129.8-31.6; H/3,4-ClMeC6H3, H/H, 211-14, H, , 159.2-60.6; 6-MeO/Ph, H/H, 205-9, H, (V), 137.4-9.6; 6-MeO/2-MeC6H4, H/H, 247-50, H, , 139.2-41.4; 6-MeO/3-MeC6H4, H/H, 206-8, H, , 119.8-23.4; 6-MeO/4-MeC6H4, H/H, 196-8, H, 172.2-3.4; 6-MeO/2-MeOC6H4, H/H, 246-8, H, (VI), 98.2-100.2; 6-MeO/4-MeOC6H4, H/H, 205-10, H, , 185.6-8.6; 5-PhCH2O/4-MeC6H4, H/H, 148-55, H, , 151.4-3.6; 5-HO/4-MeC6H4, H/H, , H, , 193.2-195.8; 5-HO/4-MeC6H4, H/H, , H, MeSO3H, 233-35; 5-PhCH2O/PhCH2CH2, H/H, 135-40, H, , 121-3; 5-HO/PhCH2CH2, H/H, , H, , 198.0-201.6; 5-MeS/Ph, H/H, 188-91, H, 110.2-11.6; 5-MeS/4-MeC6H4, H/H, 211-13, H, , 111.0-13.6; 5,6-OCH2O/Ph, H/H, 267-9, H, (VII), 141.0-3.2; 5,6-OCH2O/0-MeC6H4, H/H, 214.6-15.8, H, , 159.2-60.8; 5,6-OCH2O/3-MeC6H4, H/H, 212-16, H, (VIII), 130.0-1.4; 5,6-OCH2O/4-MeC6H4, H/H, 266.4-78.4, H, , 187.0-8.8; 5,6-OCH2O/2-MeOC6H4, H/H, 205-9, H, (IX), 158.0-9.4; 5,6-(MeO)2/Ph, H/H, 256.8-8.8, H, , 128.4-30.0; 5,6-(MeO)2/2-MeC6H4, H/H, 221-6, H, HCl (X), 218.4-23.4; 5,6-(MeO)2/3-MeC6H4, H/H, 231-8, H, , 118.4-19.6; 5,6-(MeO)2/4-MeC6H4, H/H, , H, (XI), 137.8-9.2; 5,6-(MeO)2/4-MeC6H4, H/H, , OH, , 193.2-198.0; 5,6-(MeO)2/2-MeOC6H4, H/H, 218-22, H, (XII), 116; 5,6-(MeO)2/3-MeOC6H4, H/H, 234.4-6.4, H, , 123.0-4.0; 5,6-(MeO)2/4-MeOC6H4, H/H, 228-36, H, , 158.8-64.0; 5,6-(MeO)2/4-MeSC6H4, H/H, 236.4-8.2, H, , 175.4-7.2; 5,6-(EtO)2/Ph, H/H, 180.0-1.0, H, 123.0-5.2; H/Ph, Me/H, H, , 154.2-5.6, 5,6-(MeO)2/Ph, Me/H, 163-74, H, HCl, 249.0-55.4; 5,6-OCH2O/4-MeOC6H4, Me/H, 173-266, H, , 160.8-2.8; 5,6-OCH2O/Ph, H/Me, 219, OH, , 171-2.5; 5,6-(MeO)2/Ph, H/Me, 215-22, OH, , 128.4-30.2; H/Ph, Me/Me, , OH, , 136.8-9.6; H/2-C5H4N, H/H, 242-3, H, HCl, 232.2-4.4; 4-MeO/Ph, H/H, , H, , 177.2-82.2; 5-MeO/Ph, H/H, 224-7.5, H, ,

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147.4-50.0; 7-MeO/Ph, H/H, , H, , 122.0-5.2; 6-Me/Ph, H/H, , H, , 174.2-5.2; 6-EtO/Ph, H/H, 165, H, , 159.6-63.2; 6-MeO/Ph, Me/H, 218-20, H, HCl, 253.2-6.2; 6-MeO/Ph, Ph/H, 155-60, H, , 148.2-8.8; 6-MeO/2-ClC6H4, H/H, , 125.2-8.8, H, 125.2-8.8; 6-MeO/3-ClC6H4, H/H, 214-16, H, , 103.6-4.4; 6-MeO/3-MeOC6H4, H/H, 211-13, H, , 142.0-4.6; 6-MeO/2-EtOC6H4, H/H, 180-4, H, , 159.4-61.4; 6-MeO/2,6-Me2C6H3, H/H, 215-18, H, , 135.2-6.8; 6-MeO/5,2-Cl(MeO)C6H3, H/H, 208-11, H, , 121.8-8.6; 5,6-(MeO)2/PhCH2, H/H, 210.2-11.8, H, , 113.0-4.4; 5,6-(MeO)2/H, H/H, H, , 109.6-11.4; 5-EtO,6-MeO/Ph, H/H, 215-22, H, , 129.2-30.6; 5,6-(MeO)2/2-C5H4N, H/H, 249.6-51.6, H, HCl, 210.2-11.8; 5,6-OCH2CH2O/Ph, H/H, 172.5-8.5, H, , 170.8-6.8; 5,6-(MeO)2/2-MeOC6H4, Me/H, 211.4-12.6, H, 2 HCl, 217.4-20.8; 5,6-(MeO)2/2-EtOC6H4, H/H, 135-43, H, , 120.4-2.0; 5,6 (MeO)2/2-MeC6H4, Me/H, 119-22, H, , 119.8-21.6; 5,6-(MeO)2/3-MeC6H4, Me/H, 120-2, H, 2, HCl, 210.2-3.8; 5,6-(MeO)2/3-MeOC6H4, Me/H, 159-63.5, H, 2 HCl, 182.6-4.2; 5,6-(MeO)2/2,6-Me2C6H3, H/H, 253.2-6.2, H, , 117.8-9.6; 5,6-OCH2O/2-MeOC6H4, Me/H, 233-5, H, , 137.0-43.0; 5,6-OCH2O/2-MeOC6H4, Me/Me, H, , 118.2-19.6; 5,6-OCH2O/2-MeOC6H4, Me/PhCH2, H, , 169.2-70.2; 5,6-OCH2O/4-MeOC6H4, H/H, 257-8, H, , 182.4-4.6; 5,6-OCH2O/2-BuOC6H4, H/H, 164-7.5, H, , 125-6.4; 5,6 (EtO)2/2-MeOC6H4, H/H, 185-6.5, H, , 89.4-92.0; 5,6-(EtO)2/3-MeOC64, H/H, 162-5.5, H, , 97.6-8.4; H/Ph, H/H, 224.2-5.6; H/PhCH2, H/H, 174.4-75.6; H/H, H/H, 149.8-52.0; 5.6-(MeO)2/2-ClC6H4, H/H, 214 In addition, compds. XIII are prepd. by treating a 3-indolealkanoic acid with a chloroformate ester in the presence of Et3N at -10° in acetone and then adding the appropriate piperazine and stirring at room temp. The ppt. is filtered off and discarded, and the filtrate evapd. to dryness, taken up in CHCl3, washed with H2O and dil. NaOH, dried, and then the solvent is removed to give XIII. XIII is reduced with LiAlH4 to give XIV. In the same manner was prepd. 1-[3-(1-indolyl)propyl]-4-phenylpiperazine (XV), m. 96.7-8.4°. XIII, XIV; R1/R2, CnHZn, m.p. (°C.), m.p. (°C.); H/Ph, CH2, 179.4-81.6; H/Ph, CH2CH2, 136.2-37.4, 126.6-27.8; H/3 MeOC6H4, CH2, , 146.4-7.6; H/2-ClC6H4, CH2CH2, , 140.8-3.6; H/2-MeC6H4, CH2CH2, , 102.4-4.2; H/2-MeOC6H4, CH2CH2, 173.0-6.0, 156.8-9.2; H/Ph, (CH2)3, , 96.0-100.8; H/2-MeOC6H4, (CH2)3, 129-32, 120.6-3.8; H/3-MeOC6H4, (CH2)3, , 234.2-5.8 (HCl salt); 6-MeO/Ph, CH2CH2, 169-72,196.4-7.6; 6-MeO/2-MeOC6H4, CH2CH2, 120.5-2.0, 153.2-6.0, 5,6-(MeO)2/3-ClC6H4, CH2, , 236.8-9.2 (HCl salt); 5,6-OCH2O/Ph CH2CH2, 178-80, 142.6-4.2 Also, 5.6 g. 2-(3-indolyl)ethyl bromide (XVI), 4.1 g. 1-phenylpiperazine (XVII) and 2.1 g. of NaHCO3 were refluxed in EtOH for 6 hrs. The solvent was removed in vacuo, H2O added along with dil. NaOH until alk. and the mixt. extd. with Et2O. The ext. was dried and the solvent removed to give (XVIII) (R1 = H, R2 = Ph), m. 131.6-3.6°. Similarly were prepd. the following XVIII (R1, R2, and m.p. given): H, 4-ClC6H4 (XIX), 185.2-6.8°; H, 4-MeC6H4 (XX), 147.8-54.8°; 5-MeO, 4-MeC6H4 (XXI), 108.6-11.0°; H, PhCH:CHCH2 (XXII), 258.2-63.6°. XVIII (10 g.) was added to a soln. of 0.83 g. Na in

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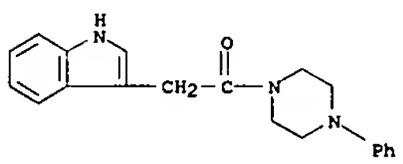
300 ml. liquid NH3. The mixt. was stirred for 1 hr., 5.23 g. MeI was added, stirring continued for 3 hrs., and the mixt. kept for 2 days at room temp. Then, 300 ml. Et2O was added with 50 ml. H2O. The org. layer was sepd. and dried over anhyd. Na2SO4. The solid that sepd. was collected and extd. with CHCl3. The CHCl3 soln. was evapd. to give 4.7 g. 1-[2-(1-methyl-3-indolyl)ethyl]-4-phenylpiperazine (XXIII), m. 93.8-5.6° (MeOH). Also 6.25 ml. formalin (XXIV) and 13.3 g. XVII in 100 ml. dioxane was cooled to 5-10° and a soln. of 9.0 g. of indole (XXV) added with stirring over 20 min. When half of XXV had been added, 20 ml. HOAc was added. The reaction was kept for 18 hrs. at room temp. and then was dild. with 400 ml. H2O and extd. with Et2O. The aq. layer was sepd., basified with aq. NaOH and extd. with Et2O. The org. exts. were dried and evapd. to give 1-(3-indolylmethyl)-4-phenylpiperazine (XXVI), m. 184.6-6.8° (EtOH). Similarly, 5,6-dimethoxyindole (XXVII) with XXIV and XVII gave 1-(5,6-dimethoxy-3-indolylmethyl)-4-phenylpiperazine (XXVIII), m. 159.2-60.2°. In addn., 38.7 g. N-(4-chlorophenyl)-N,'N'-dibenzylethylenediamine (XXIX) and 22.5 g. α-chloroacetyl chloride (XXX) were mixed in CHCl3 and refluxed for 5 hrs. to give 1-(N,N-dibenzylamino)-2-[N'-(α-chloroacetyl)-N'-(4-chlorophenyl)]ethylamine-HCl (XXXI), m. 161.0-3.8°. XXXI neutralized, refluxed in Cellosolve 4 hrs., and debenzylated with 10% Pd-C gave 1-(4-chlorophenyl)-2-piperazinone-HCl (XXXII), m. 192.8-4.8°. Similarly, 1-(N,N-dibenzylamino)-2-(N'-phenyl)ethylamine (XXXIII) and XXX gave 1-phenyl-2-piperazinone (XXXIV), m. 100-5° (p-toluenesulfonate m. 220.2-4.6°); 1 - (N,N - dibenzylamino) -2- [N' - (2,6 - dimethylphenyl)]ethylamine (XXXV) and XXX gave 4-benzyl-1-(2,6-dimethylphenyl)2-piperazinone-HCl (XXXVI), m. 248.8-64.8°, upon partial debenzylation, and 1-(2,6-dimethylphenyl)-2-piperazinone-HCl (XXXVII), m. 224.8-26°, upon complete debenzylation. N-Benzyl-N-methylaminoethylamine (XXXVIII) (11.5 g.) in 20 ml. THF was added with stirring to 14.6 g. I in 100 ml. THF. The mixt. was allowed to stand 0.5 hr. then dild., and neutralized with one equiv. NaOH. The product was collected and recrystd. from EtOH twice to give 9.7 g. N-benzyl-N'-(3-indolyl)glyoxalyl-N-methylethylenediamine (XXXIX), m. 124.5-127°. XXXIX was reduced with LiAlH4 in THF to give N-benzyl-N'-[2-(3-indolyl)ethyl]-N-methylethylenediamine (XL), m. 102-5°. XL and XXX gave 1-[2-(3-indolyl)ethyl]-4-methyl-2-piperazinone benzochloride (XLI), m. 226.6-8.6°. I and N-benzyl-N-phenylaminoethylamine (XLII) gave N-benzyl-N'-(3-indolyl)glyoxalyl-N-phenylethylenediamine (XLIII), m. 162.2-2.8°, and XLIII reduced with LiAlH4 in THF gave N-benzyl-N'-[2-(3-indolyl)ethyl] - N - phenylethylenediamine - 2HCl, m. 171.4-5.4°. Also, 3.52 g. XXXIV, 5.0 g. 2-(3-indolyl)ethyl bromide and 2.8 g. anhyd. K2CO3 were refluxed in 30 ml. MeCN, then cooled, dild. with H2O and basified with NaOH. The mixt. was extd. with CHCl3 to give 2.4 g. 1-[2-(3-indolyl)ethyl]-4-phenyl-3-piperazinone, m. 163-2-4.4° (MeOH). The lethal dosage of several of the compds. was given. Thus, L.D.50 (mg./kg.) is IV 440, V 3090, VI 190, VII > 4000, VIII 500, IX 2680, X 220, XI 410 ± 176, and XII 110.
IT 81807-97-8P, Piperazine, 1-(indol-3-ylacetyl)-4-phenyl-

L5 ANSWER 294 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RL: PREP (Preparation)
(prepn. of)
RN 81807-97-8 CAPLUS
CN Piperazine, 1-(1H-indol-3-ylacetyl)-4-phenyl- (9CI) (CA INDEX NAME)



L5 ANSWER 295 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1964:68189 CAPLUS
DOCUMENT NUMBER: 60:68189
ORIGINAL REFERENCE NO.: 60:11997c-h,11998a-f
TITLE: Indolo-α-pyrones and indolo-α-pyridones
AUTHOR(S): Plieninger, Hans; Mueller, Wolfgang; Weinerth, Klaus
CORPORATE SOURCE: Univ. Heidelberg, Germany
SOURCE: Chemische Berichte (1964), 97(3), 667-81
CODEN: CHBEAM; ISSN: 0009-2940
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 60:68189
GI For diagram(s), see printed CA Issue.
AB The reaction of 3-indolylacetic acid derivs. with carboxylic acid anhydrides and Et2O.BF3 yielded yellow compds. which were identified on the basis of their chemical and spectroscopic properties as indolopyrones (I). I were converted with bases or alc. HCl to 2-acylated indoleacetic acid derivs. from which the I could be regenerated. Both classes of compds. underwent Diels-Alder addition to carbazole derivs. 3-Indolylacetic acid (II) (10 g.) and 25 cc. Ac2O treated dropwise slowly with stirring with 10 cc. Et2O.BF3 yielded 6.4 g. III (R = Me) (IV), orange-red crystals, m. 260° (decomposition)(EtOH). II with 1 cc. HCO2Ac and a drop Et2O.BF3 aldo yielded IV. V (R = Me, R' = H) (VI) (434 mg.) and 8.5 cc. Ac2O refluxed 45 min. under N yielded 305 mg. IV, m. 257°. II (10.5 g.), 50 cc. (EtCO)2O, and 9 cc. Et2O.BF3 yielded 8.1 g. III (R = Et) (VII), lemon-yellow needles, m. 189-91° (decomposition). IV (3.5 g.), 10 cc. (PrCO)2O, and 3 cc. Et2O.BF3 gave 2.6 g. III (R = Pr) (VIII), golden-yellow or red needles, m. 187-90° (decomposition) (AcOEt). V (R = Pr, R' = H) (IX) (580 mg.) and 10 cc. Ac2O refluxed 45 min. yielded 430 mg. VIII, m. 193° (decomposition). IV (300 mg.) in 5 cc. aqueous NaOH and a little EtOH heated on the water bath gave 310 mg. VI, m. 214° (decomposition) (aqueous EtOH). VI (1.0 g.) and 0.35 cc. AcCl in 35 cc. MeOH refluxed 5 h. gave 1.2 g. Me ester (X) of VI, m. 139° (aqueous MeOH). VII (300 mg.) saponified with alkali yielded 240 mg. V (R = Et, R' = H), m. 218-19° (aqueous EtOH); Me ester (XI), needles, m. 142° (aqueous MeOH), 96%; Et ester (XII), m. 149° (Me2CO), 79%. VIII (227 mg.) saponified with alkali gave 207 mg. IX, m. 205-7° (EtOH). VII (350 mg.) and 0.2 cc. concentrated HCl in 15 cc. EtOH heated 1.5 h. at 75° gave 324 mg. XII. VIII (3.0 g.) gave similarly 74% Me ester (XIII), m. 119°, and the Et ester, m. 105-6°, of V (R = Pr, R' = H). VII (852 mg.) in 100 cc. THF hydrogenated 3-5 h. over prehydrogenated Pd-C yielded 770 mg. XIV (R = Et) (XV), needles, m. 128° (AcOEt). VIII (909 mg.) gave similarly 130 mg. XIV (R = Pr), m. 129° (AcOEt). IV (800 mg.) and 1.50 g. N-phenylmaleimide (XVI) heated slowly under N and kept 1 h. at 120° yielded 1.43 g. XVII (R = Me, R' = PhN) (XVIII), m. 315-16° (Me2CO-hexane). IV (200 mg.) and 346 mg. XVI in 50 cc. THF kept 24 h. at room temperature gave 385 mg. XVIII, m. 315-16°. IV (1.95 g.) in 100 cc. dry THF and 1.96 g. maleic anhydride (XIX) stirred 30 h. under a stream of N gave 2.00 g. XVII (R = Me, R' = O), needles, m. 317°. VII (213 mg.) and 380 mg. XVI heated at 60-70° or in THF kept at 20-5° gave 93% XVII (R = Et, R' = PhN), needles, m. 349-50°(MeCN or AcOEt). VII (1.18 g.) with 1.20 g. XIV in THF yielded 1.45 g. XVII (R = Et, R' = O), m. 326° (MeCN). VIII (454

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mg.) with 432 mg. XIV gave 500 mg. XVII (R = Pr, R' = O), needles, m. 241° (MeCN). IV (600 mg.) and 4 cc. (.tplbond.CCO2Me)2 heated 5 min. at 130° gave 730 mg. di-Me ester of 1-methylcarbazole-2,3-dicarboxylic acid (XX), m. 187° (CHCl3). Similarly was prepd. the di-Et ester of XX, m. 157-8° (C6H6-petr. ether), 52%. XV (100 mg.) with 81 mg. XVI heated 5 min. at 120° yielded 90 mg. 1-ethyl-1,2,3,4-tetrahydrocarbazole-2,3-dicarboxylic acid N-phenylimide, m. 205° (AcOEt). 3-Indolylacetamide (XXI)(1.74 g.) in 1.5 cc. Ac2O and 6 cc. dry Et2O treated 3 h. with 1.5 cc. Et2O.BF3 gave 275 mg. 1-Ac deriv. (XXII) of XXI, m. 193-5° (EtOH). 3-Indolyl-N,N-dimethylacetamide (XXIII)(1.00 g.), m. 125-7°, 4 cc. Ac2O, 6 cc. Et2O, and 4 cc. Et2O.BF3 stirred 2 h. gave 315 mg. 1-Ac deriv. (XXIV) of XXIII, m. 150-1° (AcOEt). IV (1.00 g.) and 150 cc. satd. NH3-MeOH refluxed 1 h. yielded 512 mg. 2-acetyl-3-indolylacetamide (XXV), did not melt but changed at about 220° to yellow-brown feathers. XXV (500 mg.) in 25 cc. hot EtOH treated with 10 cc. aq. 2,4-(O2N)2C6H3NHNH2-H3PO4 yielded 780 mg. deep dark red 2,4-dinitrophenylhydrazone, m. 264°. Xanthydrol (0.25 g.) in 7 cc. AcOH heated 0.5 h. with 0.25 g. XXV on the water bath yielded the xanthydryl deriv., m. 264° (aq. dioxane). VII(1.00g.)with 100 cc. satd. NH3-MeOH gave the 2-EtCO analog of XXV, colorless needles changing to yellow feathers at about 200° and then charring. VIII (1.00 g.) gave similarly the 2-PrCO analog of XXV which did not melt but changed above 200° to another, yellow compd. X or XXV (2.00 g.) in 20 cc. NH3-MeOH (d15 0.78) kept 14 days at room temp. yielded 1.40 g. XXVI (R = Me, R' = H) (XXVII), decompd. at about 300°. XXV (65 mg.) heated under N 15 min. at 240° yielded 32 mg. XXVII. XXV (110 mg.) in 5 cc. 2N NaOH refluxed 1 h. yielded 50 mg.

XXVII. XI (2.00 g.) kept 60 days in 20 cc. NH3-MeOH yielded 1.43 g. XXVI (R = Et, R' = H) (XXVIII), decompd. at about 300°. XIII (1.0 g.) kept 30 days in 10 cc. NH3-MeOH gave 727 mg. XXVI (R = Pr, R' = H), decompd. at about 300°. X (500 mg.) and 5 cc. MeNH2-MeOH (d20 0.74) heated 20 h. at 60° in an autoclave gave 220 mg. 2-acetyl-3-indolyl-N-methylacetamide (XXIX). XXIX (120 mg.) heated 1 h. under N at 210° gave 78 mg. XXVI (R, R' = Me), did not melt. XI gave similarly the 2-EtCO analog of XXIX; a 115-mg. portion heated 1.5 h. at 220° under N yielded 70 mg. XXVI (R = Et, R' = Me)(XXX), decompd. 270-5°. XXVIII (750 mg.) and 4 cc. Ac2O refluxed 5 min. gave 585 mg. 6-acetoxy-2-ethylindolo[2',3':3,4]pyridine, m. 158° (AcOEt-petr. ether). XXVII (800 mg.) and 1.52 g. XVI heated 6 h. under N at 130° yielded 1.3 g. XXXI (R = Me), did not melt. XXVIII (425 mg.) and 762 mg. XVI heated 7 h. at 130° yielded 660 mg. XXXI (R = Et), did not melt. 2,4,5-Ac(MeO)2C6H2CH2CO2Et (1.00 g.) in 10 cc. 35% aq.

MeNH2 kept 5 h. at room temp. yielded 480 mg. 6,7-dimethoxy-1,2-dimethyl-3-isoquinolone, decompd. above 195°. XXXII (R = H) (100 mg.) and 346 mg. XVI heated 4.5 h. at 120° yielded 162 mg. XXXIII (R = H), m. above 300° (MeCN). XXXII (R = Me) (900 mg.) and 900 mg. XVI heated 5 h. at 130° yielded 1.5 g. XXXIII (R = Me), m. 275-8° (MeCN or AcOEt). The UV absorption spectra of IV, VIII, XXI, XXII, XXIV, XXVII, and XXX are recorded.

IT 91566-04-0P, Indole-3-acetamide, N,N-dimethyl- 92255-60-2P, Indole-3-acetamide, 1-acetyl-N,N-dimethyl-

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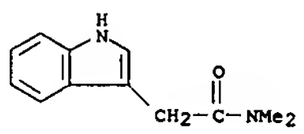
RL: PREP (Preparation)
(prepn. of)

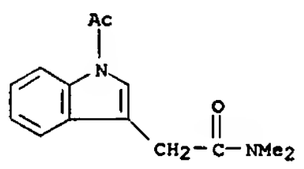
RN 91566-04-0 CAPLUS

CN 1H-Indole-3-acetamide, N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 92255-60-2 CAPLUS

CN Indole-3-acetamide, 1-acetyl-N,N-dimethyl- (7CI) (CA INDEX NAME)



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ACCESSION NUMBER: 1964:52796 CAPLUS
DOCUMENT NUMBER: 60:52796
ORIGINAL REFERENCE NO.: 60:9293g-h,9294a-h,9295a-h,9296a-b
TITLE: Indolylpiperazines
PATENT ASSIGNEE(S): Sterling Drug Inc.
SOURCE: 41 pp.
DOCUMENT TYPE: Patent
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FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 944443		19631211	GB	
US 3188313		19650608	US 1959-842203	19590925
PRIORITY APPLN. INFO.:			US	19590925

GI For diagram(s), see printed CA Issue.

AB Compds. of type I and II, in which R1 is H, halogen, alkyl, alkoxy, or aryl, R2 is H, alkyl, hydroxyalkyl, or aryl, R3 and R4 is H, alkyl, or aryl, n is 1 to 7, and in which the indole group may be joined in the 2-position or (as shown) the 3-position, were made. These are useful as hypotensive agents, as antinauseants, antipyretics, sedatives, tranquilizers and muscle relaxants; they inhibit apomorphine-induced vomiting, and prolong the narcosis of ether and barbiturates. A solution of 177 g. (PhCH2)2NCH2CH2NHPh, 120 g. ClCH2COCl and 650 m. CHCl3 was refluxed for 5.5 hrs. to yield 190 g. (PhCH2)2NCH2CH2NPhCOCH2Cl, an oil. This was dissolved in EtOCH2CH2OH, the solution refluxed 4 hrs., cooled, diluted with 650 ml. absolute EtOH, 4 g. Pd-C added, and the mixture reduced by H at 50 lb./in.2 to give 1-phenyl-2-piperazinone (VI), m. 100-5° (p-toluenesulfonate m. 220.2-4.6°). Similarly made from (PhCH2)2NCH2CH2N(4-ClC6H4)(COCH2Cl) (HCl salt m. 161.0-3.8°) was 1-(4-chlorophenyl)-2-piperazinone (HCl salt m. 192.8-4.8°); from 4-benzyl-1-(2,6-dimethylphenyl)-2-piperazinone (HCl salt m. 248.8-64.8°), 1-(2,6-dimethylphenyl)-2-piperazinone (HCl salt m. 224.8-6.0). The I and II were made by various methods. Method A: A mixture of 5.6 g. 2-(3-indolyl)ethyl bromide (VII), 4.1 g. 1-phenylpiperazine, 2.1 g. NaHCO3, and 30 ml. absolute EtOH was refluxed for 6 hrs. to yield 1.4 g. I (R1 = R3 = R4 = H, R2 = Ph, n = 2), m. 131.6-6.0°. Similarly prepared were these I (R3 = R4 = H, n = 2; R1, R2, and m.p. given): H, 4-ClC6H4, 185.2-6.8°; H, p-tolyl, 147.8-54.8°; 5-MeO, p-tolyl, 108.6-11.0°; H, PhCH:CHCH2, 258.2-63.6°. Also made was 1-[2-(3-indolyl)ethyl]-trans-2,5-dimethylpiperazine, m. 189.2-90.4°, and from VI and VII 1-[2-(3-indolyl)ethyl]-4-phenyl-3-piperazinone, m. 163.2-4.4°. Method B: To a cold solution of 79.2 g. 1-(o-tolyl)piperazine in 500 ml. tetrahydrofuran (VIII) was added 31.2 g. (3-indolyl)glyoxalyl chloride (IX), the white precipitate filtered off, the filtrate evaporated, the residual gum taken up in a warm mixture of 700 ml. H2O, 120 ml. AcOEt and 25 ml. AcOH, and the solid collected, to give 41.5 g. III (R1 = R3 = R4 = H, R2 = o-tolyl) (X). Similarly prepared were these III

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(R3 = R4 = H; R1, R2, and m.p. given): H, Me, --; H, HOCH2CH2, --; H, m-tolyl, --; H, 2-MeOC6H4, --; H, 4-MeOC6H4, 243-5°; H, 3,4-ClMeC6H3, 211-14°; 6-MeO, Ph, 205-9°; 6-MeO, o-tolyl, 247-50°; 6-MeO, m-tolyl, 206-8°; 6-MeO, p-tolyl, 196-8°; 6-MeO, 2-MeOC6H4, 246-8°; 6-MeO, 4-MeOC6H4, 205-10°; 5-PhCH2O, p-tolyl, 148-55°; 5-PhCH2O, PhCH2CH2, 135-40°; 5-MeS, Ph, 188-91°; 5-MeS, p-tolyl, 211-13°; 5,6-(CH2O2), Ph, 267-9°; 5,6-(CH2O2), o-tolyl, 214.6-15.8°; 5,6-(CH2O2), m-tolyl, 212-16°; 5,6-(CH2O2), p-tolyl, 266.4-78.4°; 5,6-(CH2O2), 2-MeOCH2CH2, 205-9°; 5,6-(MeO)2, Ph, 256.8-8.8°; 5,6-(MeO)2, o-tolyl, 211-16°; 5,6-(MeO)2, m-tolyl, 231-8°; 5,6-(MeO)2, p-tolyl, --; 5,6-(MeO)2, 2-MeOC6H4, 218-22°; 5,6-(MeO)2, 3-MeOC6H4, 234.4-6.4°; 5,6-(MeO)2, 4-MeOC6H4, 228-36°; 5,6-(MeO)2, 4-MeSC6H4, 236.4-8.2°; 5,6-(EtO)2, Ph, 180.0-1.0°; H, 2-pyridyl, 242-3°; 4-MeO, Ph, --; 5-MeO, Ph, 224-7.5°; 7-MeO, Ph, --; 6-Me, Ph, --; 6-EtO, Ph, 165° (decompn.); 6-MeO, 2-ClC6H4, 125.2-8.8°; 6-MeO, 3-ClC6H4, 214-16°; 6-MeO, 3-MeOC6H4, 211-13°; 6-MeO, 2-EtOC6H4, 180-4°; 6-MeO, 2,6-Me2C6H3, 215-18°; 6-MeO, 5,2-Cl(MeO)C6H3, 208-11°; 5,6-(MeO)2, PhCH2, 210.2-11.8°; 5,6-EtO(MeO), Ph, 215-22°; 5,6-(MeO)2, 2-pyridyl, 249.6-51.6°; 5,6-(OCH2CH2O), Ph, 172.5-8.5°; 5,6-(MeO)2, 2-EtOC6H4, 135-43°; 5,6-(MeO)2, 2,6-Me2C6H3, 253.2-6.2°; 5,6-(CH2O2), 4-MeOC6H4, 257-8°; 5,6-(CH2O2), 2-BuOC6H4, 164-7.5°; 5,6-(EtO)2, 2-MeOC6H4, 185-6.5°; 5,6-(EtO)2, 3-MeOC6H4, 162-5.5°; H, Ph, 224.2-5.6°; H, PhCH2, 174.4-5.6°; 5,6-(MeO)2, 2-ClC6H4, .apprx.214°; 6-Cl, Ph, 270-4°; 6-MeO, 2-pyridyl, 231-3°; 5,6-(MEO)2, 2-BuOC6H4, 171-4°; 5,6-(MeO)2, 2-EtC6H4, 193-8°; 5,6-(MeO)2, 2,5-(MeO)2C6H3, 208-10°; 5,6-(CH2O2), 2-pyridyl, 271-3°; 5,6-(MeO)2, 2-MeSC6H4, 219-21°. Also prepd. were these III (R1, R2, R3, R4, and m.p. given): H, Ph, Me, H, --; 5,6-(MeO)2, Ph, Me, H, 163-74°; 5,6-(CH2O2), 4-MeOC6H4, Me, H, 173-266°; 5,6-(CH2O2), Ph, H, Me, 219-19.8°; 5,6-(MeO)2, Ph, H, Me, 215-22°; H, Ph, Me, Me, --; 6-MeO, Ph, Me, H, 218-20°; 6-MeO, Ph, Ph, H, 155-60°; 5,6-(MeO)2, 2-MeOC6H4, Me, H, 211.4-12.6°; 5,6-(MeO)2, o-tolyl, Me, H, 119-22°; 5,6-(MeO)2, m-tolyl, Me, H, 120-2°; 5,6-(MeO)2, 3-MeOC6H4, Me, H, 159-63.5°; 5,6-(CH2O2), 2-MeOC6H4, Me, H, 233-5°; 5,6-(MeO)2, Ph, Et, H, 177-84°; 5,6-(EtO)2, Ph, Me, H, 182-7°. A soln. of 41.5 g. X in 250 ml. VIII was added to a suspension of 27 g. LiAlH4 in 300 ml. VIII, and the mixt. refluxed 61/2 hrs. to give 28.5 g. I (R1, R3, R4 = H, R2 = o-tolyl n = 2), m. 124.2-6.4°. Similarly prepd. were these I (R3 = R4 = H, n = 2; R1, R2, and m.p. given): H, H, 149.8-52.0°; H, Me, -- (di-HCl salt m. 279.0-83.8°); H, HOCH2CH2, -- (di-HCl salt m. 266.8-71.4°); H, m-tolyl, 163.8-6.2°; H, 2-MeOC6H4, 111.4-14.2°; H, 4-MeOC6H4, 129.8-31.6°; H, 3,4-ClMeC6H3, 159.2-60.6°; 6-MeO, Ph, 137.4-9.6°; 6-MeO, o-tolyl, 139.2-41.4°; 6-MeO, m-tolyl, 119.8-23.4°; 6-MeO, p-tolyl, 172.2-3.4°; 6-MeO, 2-MeOC6H4, 98.2-100.2°; 6-MeO, 4-MeOC6H4, 185.6-8.6°; 5-PhCH2O, p-tolyl, 151.4-3.6°; 5-PhCH2O, PhCH2CH2, 121-3°; 5-MeS, Ph, 110.2-11.6°; 5-MeS, p-tolyl, 111-13.6°; 5,6-(CH2O2), Ph, 141.0-3.2°; 5,6-(CH2O2), o-tolyl, 159.2-60.8°; 5,6-(CH2O2), m-tolyl, 130.0-1.4°; 5,6-(CH2O2), p-tolyl, 187.0-8.8°; 5,6-(CH2O2), 2-MeOC6H4, 158.0-9.4°; 5,6-(MeO)2, Ph, 128.4-30.0°; 5,6-(MeO)2, o-tolyl, -- (HCl salt m. 218.4-23.4°); 5,6-(MeO)2, m-tolyl, 118.4-19.6°; 5,6-(MeO)2, p-tolyl, 137.8-9.2°; 5,6-(MeO)2,

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2-MeOC6H4, 116.0-16.6°; 5,6-(MeO)2, 3-MeOC6H4, 123.0-4.0°; 5,6-(MeO)2, 4-MeOC6H4, 158.8-64.0°; 5,6-(MeO)2, 4-MeSC6H4, 175.4-7.2°; 5,6-(EtO)2, Ph, 123.0-5.2°; H, 2-pyridyl, -- (HCl salt m. 232.2-4.4°); 4-MeO, Ph, 177.2-82.2°; 5-MeO, Ph, 147.4-50.0°; 7-MeO, Ph, 122.0-5.2°; 6-Me, Ph, 174.2-5.2°; 6-EtO, Ph, 159.6-63.2°; 6-MeO, 2-ClC6H4, 125.2-8.8°; 6-MeO, 3-ClC6H4, 103.6-4.4°; 6-MeO, 3-MeOC6H4, 142.0-4.6°; 6-MeO, 2-EtOC6H4, 159.4-61.4°; 6-MeO, 2,6-Me2C6H3, 135.2-6.8°; 6-MeO, 2,5-MeOClC6H3, 121.8-8.6°; 5,6-(MeO)2, PhCH2 (XI), 113-14.4°; 5,6-EtO(MeO), Ph, 129.2-30.6°; 5,6-(MeO)2, 2-pyridyl -- (HCl salt m. 210.2-11.8°; 5,6-(OCH2CH2O), Ph, 170.8-6.8°; 5,6-(MeO)2, 2-EtOC6H4, 120.4-2.0°; 5,6-(MeO)2, 2,6-Me2C6H3, 117.8-19.6°; 5,6-(CH2O2), 4-MeOC6H4, 182.4-4.6°; 5,6-(CH2O2), 2-BuOC6H4, 125.0-6.4°; 5,6-(EtO)2, 2-MeOC6H4, 89.4-92.0°; 5,6-(EtO)2, 3-MeOC6H4, 97.6-8.4°; 6-Cl, Ph, 177.2-8.6°; 6-MeO, 2-pyridyl, 107.2-8.2°; 5,6-(MeO)2, 2-BuOC6H4, 93.8-5.8°; 5,6-(MeO)2, 2-EtC6H4, 104.2-7.2°; 5,6-(MeO)2, 2,5-(MeO)2C6H3, 136.8-7.8°; 5,6-(CH2O2), 2-pyridyl, -- (di-HCl salt m. 200-24°); 5,6-(MeO)2, 2-MeSC6H4, 116-17.8°. Also made were these I (n = 2; R1, R2, R3, R4, and m.p. given): H, Ph, Me, H, 154.2-5.6°; 5,6-(MeO)2, Ph, Me, H, -- (HCl salt m. 249.0-55.4°); 5,6-(CH2O2), 4-MeOC6H4, Me, H, 160.8-2.8°; 6-MeO, Ph, Me, H, -- (HCl salt m. 253.2-6.2°); 6-MeO, Ph, Ph, H, 148.2-8.8°; 5,6-(MeO)2, 2-MeOC6H4, Me, H, -- (di-HCl salt m. 217.4-20.8°); 5,6-(MeO)2, o-tolyl, Me, H, 119.8°-21.6°; 5,6-(MeO)2, m-tolyl, Me, H, -- (di-HCl salt m. 210.2-3.8°); 5,6-(MeO)2, 3-MeOC6H4, Me, H, -- (di-HCl salt m. 182.6-4.2°); 5,6-(CH2O2), 2-MeOC6H4, Me, H, 137.0-43.0°; 5,6-(CH2O2), 2-MeOC6H4, H, Me, 155.4-6.4°; 5,6-(MeO)2, Ph, Me, H, 139.6-40.4°; 5,6-(MeO)2, Ph, Et, H, --(HCl salt m. 237.6-9.0°); 5,6-(EtO)2, Ph, Me, H, 111.6-13.2°; 5,6-(CH2O2), 2-MeOC6H4, Me, Me, 118.2-19.6°; 5,6-(CH2O2), 2-MeOC6H4, Me, PhCH2, 169.2-70.2°; H, 2-MeOC6H4, H, Me, 74.6-6.4°. Catalytic debenzylation of XI gave I (R1 = 5,6-(MeO)2, R2, R3, R4 = H, n = 2), m. 109.6-11.4°, which reacted with 2-chloropyrimidine to give I (R1 = 5,6-(MeO)2, R2 = 2-pyrimidinyl, R3, R4 = H, n = 2), m. 127.2-8.2°. III (R4 = alkyl was reduced to II; other II were obtained as by-products in the LiAlH4 redn. of III. Thus were made these II (n = 1; R1, R2, R3, R4, and m.p. given): 5,6-(CH2O2), Ph, H, Me, 171-2.5°; 5,6-(MeO)2, Ph, H, Me, 128.4-30.2°; H, Ph, Me, Me, 136.8-9.6°; 5,6-(MeO)2, p-tolyl, H, H, 193.2-8.0°. Method C: On addn. of 3-(4-benzhydryl-1-piperazinyl)propionyl chloride to a soln. of 5-chloroindole and EtMgBr in ether, there was obtained IV (R1 = 5-Cl, R2 = Ph2CH, R3, R4 = H, n = 2) (XII), which with MeI and NaNH2 in liquid NH3 gave IV (R1 = 5-Cl, R2 = Ph2CH, R3 = H, R4 = Me, n = 2). Similarly made were these IV (R1, R2, R3,R4, and n given): H, Ph, Ph, H, 3; H, Ph, Ph, PhCH2, 3. XII was reduced by LiAlH4 to I (R1 = 5-Cl, R2 = Ph2CH, R3, R4 = H, n = 3), but XII reduced by NaBH4 yielded II (R1 = 5-Cl, R2= Ph2CH, R3 = R4 = H, n = 2). When IV (R4 = alkyl) was reduced by LiAlH4, then II was obtained. Thus were made these II (R1, R2, R3, R4 and n given): 5-Cl, Ph2CH, H, Me, 2; H, Ph, Ph, PhCH2, 3; 6-BuO, Me, H, 4-MeSC6H4CH2CH2, 3; 5,6,7-(MeO)3, Me, H,

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4-BuOC6H4CH2CH2, 3; H, Me, H, 3-HOC6H4CH2CH2, 3; H, Me, H, PhCH:CHCH2, 3. Method D: To a cold soln. of 22.5 g. 3-indoleacetic acid and 13.3 g. Et3N in 800 ml. Me2CO was added 18.1 g. ClCO2Bu-iso, the mixt. stirred for 10 min. at -10°, a soln. of 1-phenylpiperazine in little Me2CO added, and the mixt. kept 1.7 hrs. at room temp. to yield 5.4 g. V(R1, R2 = H, R3 = Ph, n = 1), m. 179.4-81.6°. Similarly prepd. were these V (R3 = H; R1, R2, n, and m.p. given): H, Ph, 2, 136.2-7.4°; H, 3-MeOC6H4, 1, --; H, 2-ClC6H4, 2, --; H, o-tolyl, 2, --; H, 2-MeOC6H4, 2, 173.0-6.0°; H, Ph, 3, --; H, 2-MeOC6H4, 3, 129-32°; H, 3-MeOC6H4, 3, --; 6-MeO, Ph, 2, 169-72°; 6-MeO, 2-MeOC6H4, 2, 120.5-2.0°; 5,6-(MeO)2, 3-ClC6H4, 1, --; 5,6-(CH2O2), Ph, 2, 178-80°; 5,6-(MeO)2, 2-ClC6H4, 1, 185-8.5°; 5,6-(MeO)2, 2-MeOC6H4, 2, 124.8-7.4°; 5,6-(MeO)2, Ph, 2, 120.5-2.0°; 5,6-(MeO)2, 3-MeOC6H4, 2, --. Also obtained was V [R1 = 5,6-(MeO)2, R2 = Ph, R3 = Me, n = 2). Also made was 1-[3-(1-indolyl)propionyl]-4-phenylpiperazine, an oil and 1-[3-(2-methyl-5,6-dimethoxy-3-indolyl)propionyl]-4-phenylpiperazine. By redn. of these V by LiAlH4 in VIII were prepd. these I (R3 = R4 = H; R1, R2, n, and m.p. given): H, Ph, 2, --; H, Ph, 3, 126.6-7.8°; H, 3-MeOC6H4, 2, 146.4-7.6°; H, 2-ClC6H4, 3, 140.3-3.6°; H, o-tolyl, 3, 102.4-4.2°; H, 2-MeOC6H4, 3, 156.8-9.2°; H, Ph, 4, 96.0-100.8°; H, 2-MeOC6H4, 4, 120.6-3.8°; H, 3-MeOC6H4, 4, -- (HCl salt, m. 234.2-5.8°): 6-MeO, Ph, 3, 196.4-7.6°; 6-MeO, 2-MeOC6H4, 3, 153.2-5.0°; 5,6-di-MeO, 3-ClC6H4, 2, --(HCl salt m. 236.8-9.2°): 5,6-(CH2O2), Ph, 3, 142.6-4.2°; 5,6-(MeO)2, 2-ClC6H4, 2, 86.8-9.8°; 5,6-(MeO)2, 2-MeOC6H4, 3, 120.4-1.4°; 5,6-(MeO)2, Ph, 3, 157.4-8.2°; 5,6-(MeO)2, 3-MeOC6H4, 3, 159.0-60.2°. Also made was I (R1 = 5,6-(MeO)2, R2= Ph, R3 = Me, R4 = H, n = 3), m. 117.8-18.8°, and 1-[3-(1-indolyl)propyl]-4-phenylpiperazine, m. 96.7-8.4°. Method E: A soln. of 9.0 g. indole in 100 ml. dioxane was added to a cold soln. of 6.25 ml. 40% aq. CH2O and 13.3 g. 1-phenylpiperazine in 1 l. dioxane to give I (R1 = R3 = R4 = H, R2 = Ph, n = 1), m. 184.6-6.8°. Similarly made was I (R1 = 5,6-(MeO)2, R2 = Ph, R3 = R4 = H, n = 1), m. 159.3-60.2°. Method F: The piperazine ring was formed after a substituted ethylenediamine group had been joined to the indole moiety. Thus, 27 g. IX and 58 g. (PhCH2)NPhCH2CH2NH2 in 300 ml. VIII refluxed for 5 hrs. gave 41.9 g. N-benzyl-N-phenyl-N'-[(3-indolyl)glyoxalyl}ethylenediamine, m. 162.2-2.8°, which was reduced by LiAlH4 to N-benzyl-N-phenyl-N'-[2-(3-indolyl)ethyl]ethylenediamine (XIII) (di-HCl salt m. 171.4-5.4°). Also made were N-benzyl-N-methyl-N'-[(3-indolyl)glyoxalyl]ethylenediamine, m. 124.5-7.0°, and N-benzyl-N-methyl-N'-[2-(3-indolyl)ethyl]ethylenediamine, m. 102-5°. A soln. of 11.1 g. XIII and 3.4 g. ClCH2COCl in CH2Cl2 was refluxed to yield 9.4 g. 4-[2-(3-indolyl)ethyl]-1-phenyl-1-benzyl-1m3-oxopiperazinium chloride, m. 157-9.5°, which was catalytically debenzylated to 1-[2-(3-indolyl)ethyl]-4-phenyl-2-piperazinone, m. 157.2-9.0°. Similarly made was 4-[2-(3-indolyl)ethyl]-1-methyl-1-benzyl-3-oxopiperazinium chloride, m. 229.5-32.5°, and 4-[2-(3-indolyl)ethyl]-2-methyl-1-phenyl-3-piperazinone, m. 186.4-91.8°. The latter, reduced by LiAlH4, gave 1-[2-(3-indolyl)ethyl]-3-methyl-4-phenylpiperazine, m. 116.2-17.6°.

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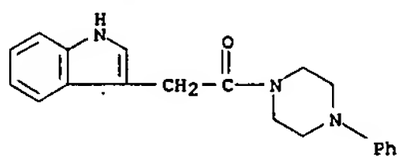
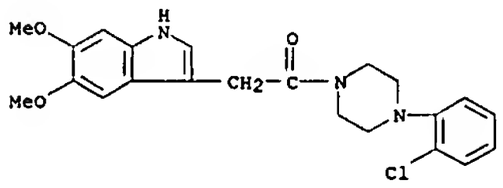
IT 81807-97-8P, Piperazine, 1-(indol-3-ylacetyl)-4-phenyl-
96266-49-8P, Piperazine, 1-(o-chlorophenyl)-4-[(5,6-dimethoxyindol-3-yl)acetyl]-
RL: PREP (Preparation)
(preparation of)
RN 81807-97-8 CAPLUS
CN Piperazine, 1-(1H-indol-3-ylacetyl)-4-phenyl- (9CI) (CA INDEX NAME)



RN 96266-49-8 CAPLUS
CN Piperazine, 1-(o-chlorophenyl)-4-[(5,6-dimethoxyindol-3-yl)acetyl]- (7CI) (CA INDEX NAME)



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ACCESSION NUMBER: 1962:449171 CAPLUS
DOCUMENT NUMBER: 57:49171
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TITLE: Research in the indole series. VI. Some substituted tryptamines
AUTHOR(S): Julia, Marc; Igolen, Jean; Igolen, Hanne
SOURCE: Bulletin de la Societe Chimique de France (1962) 1060-8
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB A series of substituted 3-indolylacetic acids was prepared from secondary aromatic amines and 4-bromo-3-oxo esters; the acids were converted via the amides or the alcs. and bromides to the corresponding tryptamines. PhNH2 (279 g.) and 185 g. PhCH2CH2Br (I) in 500 cc. dry xylene refluxed 12 h. gave 151 g. PhNHCH2CH2Ph, b0.4 155-60°. p-MeOC6H4NH2 (295 g.) and 148 g. I in 350 cc. xylene gave similarly 95 g. unreacted p-MeOC6H4NH2 and 135 g. yellow-green oily p-MeOC6H4NHCH2CH2Ph (II), b0.1 170-5°; HCl salt m. 127-8° (EtOH-Et2O). p-MeOC6H4NH2 (3 mol) and Ph(CH2)3Br gave p-MeOC6H4NH(CH2)3Ph, b0.2 180-90°, needles, m. 44° (EtOH); HCl salt, plates, m. 158-9° (H2O); HBr salt, needles, 129° (EtOH). 4-Aminoveratrole gave similarly 89% 3,4-(MeO)2C6H3NHCH2Ph, b0.2 170-2° [HCl salt, plates, m. 142-5° (iso-PrOH)], and 3,4-(MeO)2C6H3NHC6H4OMe-p, 72%, needles, 86.5° (EtOH); HCl salt m. 188° (EtOH). By the direct bromination of the corresponding oxoesters were prepared the following compds.: MeCHBrCOCH2CO2Et, 73%, b0.25 82-5°; BrCH2COCHMeCO2Et, 65%, b0.2 80-5°; BrCH2COCMe2CO2Et, 95%, -(crude); BrCH2COCH(OCEt)CO2Et, 66, b0.1 69-72°. II (209 g.) and 96.1 g. BrCH2COCH2CO2Et (III) diluted with cooling with 250 cc. dry Et2O, filtered from 138 g. II.HBr, evaporated, the residue refluxed 15 h. with 63 g. ZnCl2 in 250 cc. absolute EtOH, evaporated, treated with H2O and C6H6, and the organic layer worked up gave 113 g. Et ester (IV) of 1-phenethyl-5-methoxy-3-indolylacetic acid (V), b0.1 215-20°, yellow-orange oil, which refluxed 1-2 h. with KOHMeOH yielded 73% V, m. 129-31° (aqueous EtOH); method A. III (50 g.) and 100 g. p-MeOC6H4NHCH2Ph in 300 cc. absolute EtOH refluxed 40 h., evaporated, the residue treated with H2O and Et2O, and the Et2O phase worked up yielded 44.7 g. Et ester (VI) of 1-benzyl-5-methoxy-3-indolylacetic acid (VII), b0.15 180-5°, yellow-orange oil, which saponified in the usual manner yielded 84% VII, m. 128-9°; method B. VI was also obtained in 64% yield by method A. In the same manner were prepared the following VIII (X, R1, R2, R3, R4, method, % yield of Et ester, b.p./mm. or m.p. of Et ester, % yield of free VIII, m.p., and m.p. of corresponding skatole given): H, PhCH2CH2, H, H, H, A, 68, 204-8°/0.15, 90, 103° (C6H6) (IX), -; 5-MeO, p-MeOC6H4CH2, H, H, H, A, 55 (47% by method B), 220-8°/0.05 [m. 50-2° (EtOH)], 85, 116-18° (EtOH) (X), -; 5-MeO, Ph(CH2)3, H, H, H, A, 72, 230-5°/0.4 (XI), 50, 86° (Et2O-petr. ether) (XII), -; 5,6-(MeO)2, PhCH2, H, H, H, A, 69, 215-25°/0.15 (m. 64-5°), 82, 141° (EtOH) (XIII), 81.5°; 5,6-(MeO)2, p-MeO-C6H4CH2, H, H, H, B, 82, 86-5.87° (EtOH), 100, 127° (EtOH) (XIV), 102° (EtOH); 5-MeO, PhCH2,

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Me, H, H, A, 48, 201-5°/0.01 (m. 70.5-1.5°), 82, 173-4° (EtOH) (XV), -; 5-MeO, PhCH2, H, Me, H, A, 20, 200-10°/0.6, 45, 108° (Et2O-petr. ether) (XVI), -; 5-MeO, PhCH2, H, Me, Me, A, 65, 210-30°/0.25 (m. 80°), 70, 151-2° (EtOH) (XVII), 58° (EtOH); H, PhCH2, Me, Me, H, A, 26 (43% by method B), 178-81°/0.05, 63, 160-2° (aq. EtOH) (XVIII), --; 5-MeO, PhCH2, Me, Me, H, A, 41 (30% by method B), 190-3°/0.1 (m. 80-1° (MeOH)], 89, 148-51° (EtOH), --; 5-MeO, p-MeOC6H4CH2, Me, Me, H, A, 28, 208-12°/0.1, 76, 159-60° (EtOH), --. IV (8 g.) in 80 cc. MeOH (satd. with NH3) heated 24 h. in a sealed tube at 105°, filtered, and evapd. gave 5.2 g. 1-phenethyl-5-methoxy-3-indolylacetamide (XIX), needles, m. 147-8° (abs. EtOH); method D. The amides were also prepd. by heating the acid with urea; method C. XI (13.6 g.) in 200 cc. CHCl3 and 4.26 g. Et3N cooled to -5°, treated rapidly with 4.58 g. ClCO2Et, stirred 15 min., treated 5 min. with a stream of dry NH3, kept 1 h. at room temp., dild. with H2O, and the CHCl3 layer worked up gave 7.7 g. amide of XII, needles, m. 124-5°; method E. Similarly were prepd. the amides of the following compds. (m.p., % yield, and method given): IX, 146-7° (C6H6), 70, C; VII, 156-7°, 70, C (69% by method E); X, 138.5-9.5° (EtOH), 81, C (66% by method D); V, 147-8° (EtOH), 74, D; XII, 1245° (C6H6-petr. ether), 57, E; XIII, 167-8° (EtOH), 67, D; XIV, 166° (EtOH), 95, D; XV, 129-30° (EtOAc-petr. ether), 70, C; XVI, 180.5-82° (EtOH), 39, C; XVII, 183° (EtOH), 81, E; XVIII, 163-4° (EtOH), 70, C. By the same methods were prepd. the dimethylamides of the following acids (same data given): IX, -- (oil), 80, E [picrate m. 84° (EtOAc-petr. ether)]; V, --, 94, E; XII, --, 75, E [picrate m. 97° (EtOAc-petr. ether)]. The diethylamides of the following acids (same data given): IX, 63-4° (Et2O), 50, E [picrate m. 104-5° (EtOH-Et2O)]; V,--, 85, E [picrate m. 103-4° (EtOH-Et2O)]; XII, --, 75, E [picrate m. 117° (EtOAc-petr. ether)]. X (0.5 g.) and 0.17 g. PhNH2 in 5 cc. CH2Cl2 treated with 0.33 g. dicyclohexyldicarbodiimide, kept 16 h. at room temp., filtered from 0.26 g. dicyclohexylurea, treated with AcOH to ppt. an addnl. 0.08 g. urea, and the filtrate worked up gave 0.4 g. anilide of X, m. 133° (aq. EtOH). VI (28 g.) in 100 cc. Et2O added gradually at 0° to 4 g. LiAlH4 in 900 cc. Et2O, refluxed 3 h., and worked up gave 21 g. 1-benzyl-3-(2-hydroxyethyl)-5-methoxyindole (XX), b0.05 172-8°, m. 47-8° (Et2O-petr. ether); 3,5-dinitrobenzoate, red crystals, m. 158-61° (EtOAc). Similarly were prepd. the 3-(2-HOCH2CH2) analogs of the following compds. (b.p./mm. and % yield given): X, 185-95°/0.05, 79 [3,5-dinitrobenzoate m. 169-71° (EtOH-Et2O)]; XIII, 95-6° (Et2O-petr. ether), 91; V, 195°/0.1, 78 [picrate m. 79-81° (C6H6-petr. ether)]; XVIII, 89°, 65; XIV, 81-2° (Et2O), 80. XX (3 g.) in 140 cc. dry Et2O treated dropwise at 0° with 1.8 g. PBr3 in 30 cc. Et2O, kept 16 h. at room temp., decanted, the residual resin extd. with Et2O, and the ext. worked up gave 2.5 g. 1-benzyl-3(2-bromoethyl)-5-methoxyindole, prisms, m. 94-5° (abs. EtOH). Similarly were prepd. the 3-(2-BrCH2CH2) analogs of the following compds. (m.p. and % yield given): V, --, 45; XIII, 77-8° (EtOH), 55; XVIII, 89°, 65. XIX (5.5

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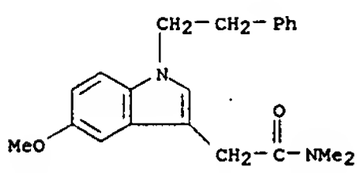
g.) and 1.4 g. LiAlH4 in 500 cc. Et2O refluxed 66 h. and worked up in the usual manner yielded 1-phenethyl-5-methoxy-3-(2-aminoethyl)indole-HCl, m. 136-8° (abs. EtOH). Similarly were prepd. the 3-(2-H2NCH2CH2) analog HCl salts of the following compds. (m.p. and % yield given): IX (XXI), 128-30° (EtOAc), 72; VII, 156-9° (EtOH-Et2O), 74 [picrate m. 167-8° (EtOH)]; X, 162-4° (EtOH-Et2O), 71; V, 136-8° (EtOH), 74; XII, 124-6° (EtOH-Et2O), 70; XIII, 95-6° (Et2O-petr. ether), 91; XIV, -- (hygroscopic), 42 [picrate m. 190-3° (EtOH)]; XV (XXII), 229-31° (EtOH), 52; XVI, 168-73° (EtOH-Et2O), 68; XVII, 228-32° (EtOH-Et2O), 73; XVIII, 78-80° (iso-PrOH), 50. The 3-(2-Me2NCH2CH2) analog HCl salts of the following compds. (same data given): IX (XXIII), 199-200° (EtOH), 58; VII, 189-91° (EtOH), 50; X, 174-6° (EtOH), 55; V (XXIIIA), 122-4° (iso-PrOH-Et2O), 60 (44) [methiodide m. 194-6° (EtOH), 75%]; XII, 143-5° (EtOH-Et2O), 66; XIII, -- (hygroscopic), 35 [picrate m. 172-4° (EtOAc)]; XVIII, 193-4° (EtOH), 86. In the same manner were prepd. the 3-(Et2NCH2CH2) analog HCl salts of the following compds. (same data given): IX (XXIV), 104-5° (EtOH-Et2O), 72; X, --, 65 [picrate m. 88-9° (C6H6)]; V (XXV), 99-100° (EtOH-Et2O), 60; XII, -- (hygroscopic), 45; XVIII, 167-9° (EtOH-iso-Pr2O), 30. 1-Benzyl-5-methoxy-3-(2-piperidinoethyl)indole-HCl, m. 202-4° (iso-PrOH), was obtained in 60% yield by heating the corresponding 3-(2-BrCH2CH2) analog (2 g.) with 1.5 g. piperidine in 65 cc. MeOH 15 h. in a sealed tube at 100°. Similarly was prepd. the 3-(2-piperidinoethyl) analog HCl salt of X, m. 180-3° (iso-PrOH), in 56% yield. VI (1.62 g.) and 0.32 g. N2H4.H2O in 20 cc. abs. EtOH refluxed 20 h., cooled, and filtered yielded 1.1 g. hydrazide of VII, m. 140° (EtOH). Similarly were prepd. the hydrazides of the following acids (m.p. and % yield given): IX, 128-30° (EtOH), 50; X, 144-6° (EtOH), 61; V, 117-18° (EtOH), 68; XIII, 173.5° (EtOH), 63; XIV, 179-82° (EtOH), 82. VII (5.1 g.) and 3.1 g. NaOAc in 10 cc. Ac2O refluxed 18 h., cooled, worked up, and the crude product (1.85 g.) chromatographed on Al2O3 gave 409 mg. 1-benzyl-5-methoxy-3-acetonylindole, m. 62.5-3.5° (Et2O-petr. ether); 2,4-dinitrophenylhydrazone, orange prisms, m. 62.5-63° (EtOAc); oxime (XXVI), prisms, m. 98.5-9.5° (C6H6-petr. ether). Similarly was prepd. the 3-acetonyl analog of XIII in 56% yield; 2,4-dinitrophenylhydrazone m. 186° (EtOH). In the same manner as XXI was prepd. the 3-(2-H2NCHMeCH2) analog HCl salt of VII, 71%, m. 190-2° (EtOH-Et2O), and the 3-(PhCH2NMeCH2CH2) analog HCl salt of X, 32%, m. 160° (EtOH-Et2O). The antiserotonin activities of XXI, XXIII, XXIIIA, XXIV, and XXV were detd. XXII did not show any tuberculostatic activity in vivo at the max. tolerable dose.

IT 94916-80-0P, Indole-3-acetamide, 5-methoxy-N,N-dimethyl-1-phenethyl- 96003-95-1P, Indole-3-acetamide, N,N-dimethyl-1-phenethyl-, picrate 96215-60-0P, Indole-3-acetamide, N,N-diethyl-1-phenethyl- 96215-61-1P, Indole-3-acetamide, N,N-diethyl-1-phenethyl-, picrate 96215-65-5P, Indole-3-acetamide, 5-methoxy-N,N-dimethyl-1-(3-phenylpropyl)-, picrate 96310-29-1P, Indole-3-acetamide, N,N-diethyl-5-methoxy-1-phenethyl-, picrate 97076-37-4P, Indole-3-acetamide, N,N-diethyl-5-methoxy-1-(3-phenylpropyl)-, picrate
RL: PREP (Preparation)

L5 ANSWER 297 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
(prepn. of)

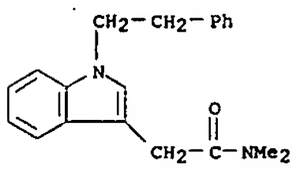
RN 94916-80-0 CAPLUS
CN Indole-3-acetamide, 5-methoxy-N,N-dimethyl-1-phenethyl- (7CI) (CA INDEX NAME)



RN 96003-95-1 CAPLUS
CN Indole-3-acetamide, N,N-dimethyl-1-phenethyl-, picrate (7CI) (CA INDEX NAME)

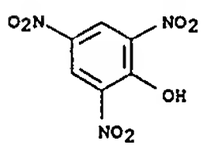
CM 1

CRN 96003-94-0
CMF C20 H22 N2 O



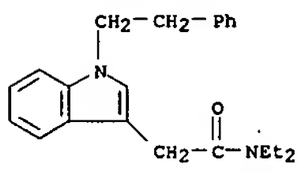
CM 2

CRN 88-89-1
CMF C6 H3 N3 O7



RN 96215-60-0 CAPLUS
CN 1H-Indole-3-acetamide, N,N-diethyl-1-(2-phenylethyl)- (9CI) (CA INDEX NAME)

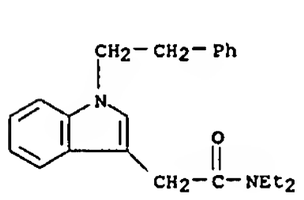
L5 ANSWER 297 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 96215-61-1 CAPLUS
CN Indole-3-acetamide, N,N-diethyl-1-phenethyl-, picrate (7CI) (CA INDEX NAME)

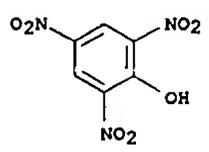
CM 1

CRN 96215-60-0
CMF C22 H26 N2 O



CM 2

CRN 88-89-1
CMF C6 H3 N3 O7

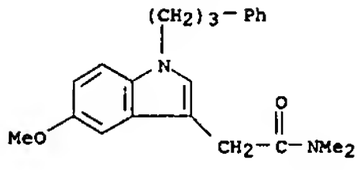


RN 96215-65-5 CAPLUS
CN Indole-3-acetamide, 5-methoxy-N,N-dimethyl-1-(3-phenylpropyl)-, picrate (7CI) (CA INDEX NAME)

CM 1

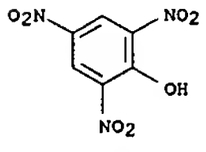
CRN 96215-64-4
CMF C22 H26 N2 O2

L5 ANSWER 297 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



CM 2

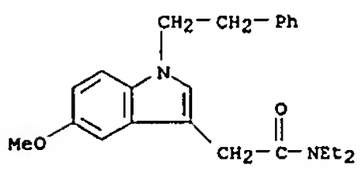
CRN 88-89-1
CMF C6 H3 N3 O7



RN 96310-29-1 CAPLUS
CN Indole-3-acetamide, N,N-diethyl-5-methoxy-1-phenethyl-, picrate (7CI) (CA
INDEX NAME)

CM 1

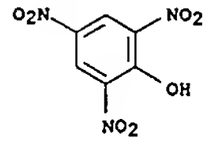
CRN 96310-28-0
CMF C23 H28 N2 O2



CM 2

CRN 88-89-1
CMF C6 H3 N3 O7

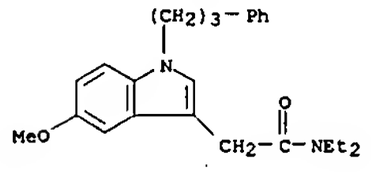
L5 ANSWER 297 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 97076-37-4 CAPLUS
CN Indole-3-acetamide, N,N-diethyl-5-methoxy-1-(3-phenylpropyl)-, picrate
(7CI) (CA INDEX NAME)

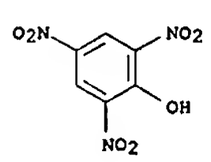
CM 1

CRN 97076-36-3
CMF C24 H30 N2 O2



CM 2

CRN 88-89-1
CMF C6 H3 N3 O7



L5 ANSWER 298 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1962:449170 CAPLUS
DOCUMENT NUMBER: 57:49170
ORIGINAL REFERENCE NO.: 57:9784b-i,9785a-b
TITLE: Research in the indole series. V. Preparation of 3-indolylacetamides and tryptamines
AUTHOR(S): Julia, Marc; Igolen, Jean
SOURCE: Bulletin de la Societe Chimique de France (1962) 1056-60
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 57:49170

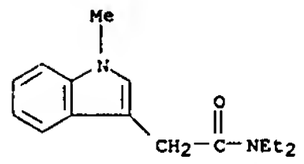
AB A series of 3-indolylacetamides was prepared from 4-bromoacetoacetamides with secondary aromatic amines and reduced to the corresponding tryptamines, p-MeOC6H4CH:NPh in AcOEt hydrogenated over PtO2 yielded p-MeOC6H4CH2NHPh (I), b15 206-8°, m. 48-9°. p-MeOC6H4CH:NC6H4OMe-p, m. 142° (EtOH), in EtOAc hydrogenated over Raney Ni at 75°/150 atmospheric yielded 90% p-MeOC6H4CH2NHC6H4OMe-p (II), plates, m. 94-5° (EtOH). 3,4-(EtO)2C6H3CH:NC6H4OMe-p, m. 96-8° (EtOH), in EtOAc hydrogenated under ambient conditions over PtO2 yielded 80% 3,4-(EtO)2C6H3CH2NHC6H4OMe-p (III), b0.15 210-12°, m. 54-5° (petr. ether). N-Piperonylidene-p-anisidine, m. 119-20° (EtOH), gave similarly N-piperonyl-p-anisidine (IV), m. 76-8° (EtOH). AcCH2CONEt2 (15.7 g.) treated with 16.0 g. Br in 90 cc. CHCl3 gave 20 g. crude BrCH2COCH2CONEt2 (V), yellow oil, which decomposed rapidly at 100° and was used without purification. BrCH2COCH2CONHPh (VI) (5.12 g.) in 12 cc. HCONMe2 and 4.28 g. MeNHPh in 6 cc. HCONMe2 kept overnight, diluted with 300 cc. H2O, extracted with C6H6, the aqueous layer basified, and extracted with Et2O gave 1.42 g. MeNHPh; the C6H6 phase worked up yielded 4.15 g. p-MeC6H4NHCH2COCH2CONHPh (VII), m. 90-1° (80% EtOH). VII (4 g.) and 4 g. ZnCl2 heated 45 min. at 100-10°, cooled, dissolved with heating in 40 cc. 4N HCl, extracted with C6H6, and the extract worked up gave 3.4 g. crystals, m. 92-112°, which chromatographed from C6H6 on Al2O3 yielded 2.65 g. 1-methyl-3-indolylacetamide (VIII), needles, m. 111-12° (80% EtOH); method A. VI (5.12 g.), 4.28 g. MeNHPh, and 90 cc. absolute EtOH refluxed 18 hrs., concentrated, diluted with 200 cc. H2O, extracted with C6H6, and the aqueous phase worked up yielded 1.75 g. MeNHPh; the C6H6 extract yielded 1.8 g. (crude) VIII, m. 111-12°; method B. VIII (200 mg.) and 15 cc. 5N HCl refluxed 1.5 hrs., refrigerated overnight, and filtered gave 1-methyl-3-indolylacetic acid, m. 125-7° (H2O). Similarly were prepared the following compds. (appearance, m.p., acetoacetanilide, secondary amine, and % yields by methods A and B obtained given): 1-ethyl-3-indolylacetanilide (IX), prisms, 104-5° (70% EtOH), VI, EtNHPh, 3.1, 2.1; 1-benzyl-3-indolylacetanilide (X), needles, 127-8° (EtOH), VI, PhNHCH2Ph, 2.4, 1.5; 5-MeO derivative of X, --, 136-7° (70% EtOH), VI, p-MeOC6H4NHCH2Ph (XI), 1.1, 1.4; 5-PhCH2O derivative (XII) of VIII, --, 162-4° (C6H6), VI, p-PhCH2OC6H4NMePh, --, 4.5; 1-anisyl-3-indolylacetanilide (XIII), needles, 130-1° (absolute EtOH), VI, I, --, 2.3; 5-MeO derivative (XIV) of XIII, prisms, 134° (80% EtOH), VI, II, 5.2, 4.8; 1-(3,4-diethoxybenzyl)-5-methoxy-3-indolylacet anilide (XV), needles, 134-6° (MeOH), VI, III, --, 4.1; 1-piperonyl analog (XVI) of XV, needles, 158-9° (C6H6), VI, IV, --, 5.5; N,N-di-Et derivative (XVII) of VIII, --, 80-1° (petr. ether), V, MeNHPh, 0.25, -- [picrate m. 124-6° (C6H6-petr. ether)]; N,N-di-Et

L5 ANSWER 298 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

deriv. (XVIII) of IX, yellow oil, --, V, EtNHPh, 6.7, -- [picrate, yellow-orange needles, m. 109-11° (C6H6-petr. ether)]; N,N-di-Et deriv. of X, prisms, 95-6° (60% EtOH), V, PhNHCH2Ph, 5.3, -- [PhCH2NPhCH2COCH2NEt2, 7.1 g., needles, m. 103-5° (abs. EtOH), was obtained as the intermediate]; 1-benzyl-5-methoxy-3-indolyl(N,N-diethyl)acetamide (XIX), -- (oil), --, V, XI, 12.1, -- [picrate, yellow needles, m. 133-5° (C6H6-petr. ether)]. X (1 g.), 0.25 g. LiAlH4, and 300 cc. Et2O refluxed 14 hrs., worked up, and the base isolated as the HCl salt gave 400 mg. 1-benzyl-3-(2-phenylaminoethyl)indole-HCl (XX), m. 136-8° (C6H6-petr. ether). XII (2.2 g.), 0.6, LiAlH4, and 1100 cc. Et2O refluxed 18 hrs. gave similarly 1.1 g. 5-PhCH2O deriv. of XX, m. 151-4° (isoPrOH). Powd. XIV (5 g.), 3 g. LiAlH4, and 1600 cc. dry Et2O refluxed 27 hrs., worked up, the yellow oily residue dissolved in Et2O, and treated with dry HCl gave 3.8 g. 1-anisyl-5-methoxy-3-(2-anilinoethyl)indole-HCl, m. 147-9° (abs. EtOH). Similarly were prepd. the following compds. (m.p. given): 1-anisyl-3-(2-anilinoethyl)indole-HCl, 151-3° (abs. EtOH)(needles); 1-piperonyl-5-methoxy-3-(2-anilinoethyl)indole-HCl (XXI), 172-5° (abs. EtOH) (needles); 1-[3,4-(EtO)2C6H3CH2] analog of XXI, 142-4° (iso-PrOH); 1-methyl-3-(2-diethylaminoethyl)indole-HCl (XXII), 203° (abs. EtOH) (needles); 1-Et homolog of XXII, 115-16° (iso-PrOH); 1-benzyl-5-methoxy-3-(2-diethylaminoethyl)indole-HCl, 135° (iso-PrOH).

IT 92647-89-7P, Indole-3-acetamide, N,N-diethyl-1-methyl-
94759-96-3P, Indole-3-acetamide, N,N-diethyl-1-methyl-, picrate
95227-21-7P, Indole-3-acetamide, N,N,1-triethyl-, picrate
95948-77-9P, Indole-3-acetamide, 1-benzyl-N,N-diethyl-
96215-63-3P, Indole-3-acetamide, 1-benzyl-N,N-diethyl-5-methoxy-, picrate
RL: PREP (Preparation)
(preparation of)

RN 92647-89-7 CAPLUS
CN Indole-3-acetamide, N,N-diethyl-1-methyl- (7CI) (CA INDEX NAME)

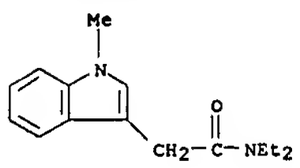


RN 94759-96-3 CAPLUS
CN Indole-3-acetamide, N,N-diethyl-1-methyl-, picrate (7CI) (CA INDEX NAME)

CM 1

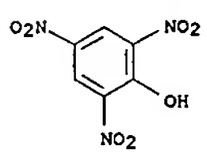
CRN 92647-89-7
CMF C15 H20 N2 O

L5 ANSWER 298 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



CM 2

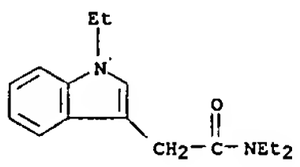
CRN 88-89-1
CMF C6 H3 N3 O7



RN 95227-21-7 CAPLUS
CN Indole-3-acetamide, N,N,1-triethyl-, picrate (7CI) (CA INDEX NAME)

CM 1

CRN 95227-20-6
CMF C16 H22 N2 O

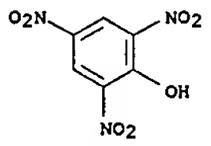


CM 2

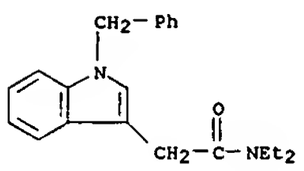
CRN 88-89-1
CMF C6 H3 N3 O7

L5 ANSWER 298 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)

L5 ANSWER 298 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



RN 95948-77-9 CAPLUS
CN Indole-3-acetamide, 1-benzyl-N,N-diethyl- (7CI) (CA INDEX NAME)



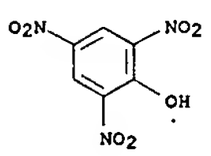
RN 96215-63-3 CAPLUS
CN Indole-3-acetamide, 1-benzyl-N,N-diethyl-5-methoxy-, picrate (7CI) (CA INDEX NAME)

CM 1

CRN 96215-62-2
CMF C22 H26 N2 O2

CM 2

CRN 88-89-1
CMF C6 H3 N3 O7

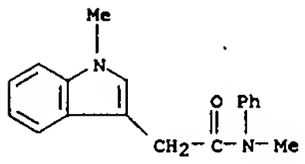


L5 ANSWER 299 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1961:22712 CAPLUS
DOCUMENT NUMBER: 55:22712
ORIGINAL REFERENCE NO.: 55:4474e-i
TITLE: New syntheses of N-substituted indole-3-acetic acids
AUTHOR(S): Julia, Marc; Tchernoff, Georgette
CORPORATE SOURCE: Ecole polytech. inst. nat. recherche agronomique, Paris
SOURCE: Bulletin de la Societe Chimique de France (1960) 741-2
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 55:22712

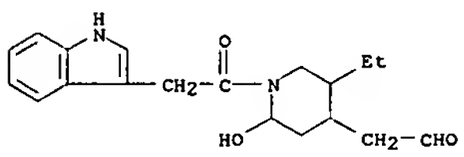
AB Secondary aliphatic amines condensed in the cold with BrCH2COCH2CO2Et (I) to give compds. that by cyclization with ZnCl2 formed N-substituted indole-3-acetic esters. Thus, N-methylindole-3-acetic acid (II) was prepared by mixing 0.4 mole PhNHMe (III) and 0.2 mole I in an equal volume C6H6; the mixture was kept overnight with exclusion of moisture. The HBr salt of III (82%) was filtered off. The bases were extracted with 4N HCl, the extract made alkaline, reextd. with C6H6, and the C6H6 solution washed, dried, and evaporated at room temperature under diminished pressure to give about 40 g. residue. The residue (10 g.) was heated (N atmospheric) with 10 g. ZnCl2 (an exothermic reaction raised the temperature to 155°); the mixture was kept 0.5 hr. at 130°, cooled, and added to Et2O and 4N HCl. The organic solution was washed, dried, evaporated and the residue (5.2 g.) distilled to give (a) 3.2 g. b1 155-60° and (b) 1.2 g. b0.5 180-200°. The former (a) was the Et ester of II, which gave (by boiling 0.5 hr. with 1.5 g. K2CO3 in 20 ml. MeOH and crystallizing from H2O) white scales, m. 127°. The latter (b) gave crystals, recrystd. (H2O) to give white prisms, m. 84° (C18H18N2O). This product (1 g.), refluxed 1 hr. with 180 ml. 6N HCl, cooled, extracted with Et2O, NaHCO3, and acidified gave 0.45 g. (66%) II, m. 122-3°. Use of PhNHMe.HBr gave lower yields (15-20%) of II. With HCl in MeOH, concentrated H2SO4, H2SO4 in AcOH, ZnCl2 in AcOH, and polyphosphoric acid as cyclizing agents, the results were poor. Similarly prepared (as was II) was N-ethylindole-3-acetic acid (IV); 24.2 g. PhNHEt (V) and 20 g. I gave 17 g. (84%) HBr salt of V and 22 g. PhN(Et)CH2COCH2CO2Et (VI). VI (11 g.) and 10 g. ZnCl2 gave (as above) 3 g. (26%) Et ester of IV, b1 165-70°. Saponification with K2CO3 in MeOH gave 2.4 g. (92%) IV, recrystd. (H2O) to give white scales, m. 102°. N-Benzylindole-3-acetic acid (VII) was prepared in an analogous manner from 9 g. PhNHCH2Ph and 5 g. I; 4.7 g. (72%) HBr salt was obtained. The bases were insol. in 4N HCl. The filtrate was treated 0.5 hr. with 6 g. ZnCl2 at 140-50°. Distillation gave 3.6 g. (53%) Et ester of VII, b0.8 180-200°; saponification gave 2 g. VII, recrystd. from petr. ether (b. 100-20°) to give a product m. 148°.

IT 108126-25-6P, Indole-3-acetanilide, N,1-dimethyl-
RL: PREP (Preparation)
(preparation of)

L5 ANSWER 299 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 108126-25-6 CAPLUS
CN 1H-Indole-3-acetamide, N,1-dimethyl-N-phenyl- (CA INDEX NAME)



L5 ANSWER 300 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CN 4-Piperidineacetaldehyde, 5-ethyl-2-hydroxy-1-indol-3-ylacetyl- (6CI) (CA
INDEX NAME)

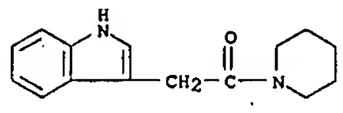


L5 ANSWER 300 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1961:18054 CAPLUS
DOCUMENT NUMBER: 55:18054
ORIGINAL REFERENCE NO.: 55:3630g-i,3631a-f
TITLE: Biogenetically-patterned synthesis in the strychninecurare alkaloid series
AUTHOR(S): Van Tamelen, E. E.; Dolby, L. J.; Lawton, R. G.
CORPORATE SOURCE: Univ. of Wisconsin, Madison
SOURCE: Tetrahedron Letters (1960), (No. 19), 30-5
CODEN: TELEAY; ISSN: 0040-4039
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
GI For diagram(s), see printed CA Issue.
AB The simple indole derivative (I) under mild conditions directly generated the fused system II, duplicating the essential framework of the strychnine-type natural products. Hydroboration-oxidation of cyclopentadiene and use of the cyclopent-3-enol p-toluenesulfonate to alkylate NCCH2CO2Et gave a product, b18 138-40°, saponified and decarboxylated to yield CH2.CH:CH.CH2.CHCH(CN)CH2Me (III), b30 115°. III reduced with LiAlH4 and the resulting primary amine, b30 97-100°, heated with 3-C8H6NCH2CO2Me gave the oily amide, CH2.CH:CH.CH2.CHCH(CH2Me)CH2NHCOCH2C8H6N-3 (IV). Hydroxylation of crude IV with OsO4 led to the required diol, 3-C8H6NCH2CONHCH2(CH2Me)CHCH.CH2.CH(OH).CH(OH).CH2, characterized as the (O2N)3C6H3 complex, m. 145.5-6.5°. When generated, the intermediate I cyclized spontaneously to the alkenol amide (V), λ 5.79, 6.03 μ, and heating the I-V mixture briefly in aqueous AcOH-NaOAc or HCO2H-HCO2Na gave II directly, bypassing the normal α-cyclization. The unstable aldehyde lactam reduced with NaBH4 and the lactam alc. (VI), m. 53-6° (sublimation at 145°/0.0001 mm.; picrate m. 152-4°) converted by LiAlH4 gave the amino alc. (VII), sublimed at 110°/0.0001 mm. The ultraviolet spectrum of VI, λ 243, 295 mμ (ε 9600, 3400, alc.) was virtually identical with that of the Wieland-Gumlich aldehyde (Bader, et al., CA 48, 13700h) and revealed the presence of the indoline ring system (A,B). II or VI showed a lactam CO band at λ 5.97 μ, indicative of a 5-membered E ring. The presence of the 2nd new C-C bond, incorporated into a β-aminoaldehyde system and requiring the presence of a 6-membered C ring, was shown by conversion of VII with PhO2CCl followed by cyclization of the intermediary urethan, λ 5.90 μ, with NaH in C6H6 to the tetrahydrooxazinone (VIII), m. 123-6°, λ 5.97 μ. The course of this reaction was demonstrated in a model series by conversion of PhNH(CH2)3OH through PhNH(CH2)O2CNHPh, λ 5.90 μ, to the cyclic urethan, λ 5.97 μ. Elemental analyses showed finally that the complete cyclization of I was accompanied by dehydration and the over-all finding allowed of no reasonable structure other than that proposed for II.
IT 102008-85-5P, 4-Piperidineacetaldehyde, 5-ethyl-2-hydroxy-1-indol-3-ylacetyl-
RL: PREP (Preparation)
(preparation of)
RN 102008-85-5 CAPLUS

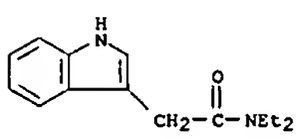
L5 ANSWER 301 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1960:34269 CAPLUS
DOCUMENT NUMBER: 54:34269
ORIGINAL REFERENCE NO.: 54:6718e-i,6719a-g
TITLE: Synthetic models of hypotensive alkaloids. V. Derivatives of tryptamine and 1,2,3,4-tetrahydronorharman
AUTHOR(S): Protiva, M.; Vejdelek, Z. J.; Jilek, J. O.; Macek, K.
CORPORATE SOURCE: Vyzkum. ustav. farm. biochem., Prague
SOURCE: Collection of Czechoslovak Chemical Communications (1959), 24, 3978-87
CODEN: CCCCAK; ISSN: 0010-0765
DOCUMENT TYPE: Journal
LANGUAGE: German
AB cf. C.A. 53, 3255i. [R means the N-methyltryptamino residue throughout this abstract] 3,4,5-Trimethoxybenzoates (Ia) of RCH2CH2OH (I), RCH2CHMeOH (II), R(CH2)3OH (III), R(CH2)4OH (IV), and R(CH2)6OH (V), 3-(2-piperidinoethyl)indole (VI), N-phenethyltryptamine (VII), 1,2,3,4-tetrahydronorharman (VIII), and its 2-benzyl (IX), 2-(m-methoxybenzyl) (X), and 2-(2-dimethylaminoethyl) (XI) derivs. were prepared and pharmacol. tested. Adding dropwise with agitation at 0° 4 g. ethylene oxide in 10 ml. Et2O to 8.7 g. RH in 70 ml. Et2O, stirring the mixture 5 hrs. below 3°, keeping overnight at room temperature, neutralizing the base with N HCl, filtering with C, alkalizing the filtrate with 20% NaOH, extracting with Et2O, drying the exts. with K2CO3, and distilling gave a mixture (b0.1-0.5 174-85°) whose chromatography on 220 g. Al2O3 yielded 5 g. RH (eluted with C6H6) and 3.8 g. I (eluted with MeOH); picrate 140° (80% EtOH). Adding dropwise with agitation at 2° 7 g. oxetane to 10.4 g. RH in 50 ml. MeOH, stirring 3 hrs. at 0-3°, keeping overnight, refluxing 2 hrs., evaporating in vacuo, dissolving the residue in N HCl, filtering with C, alkalizing the filtrate with 20% NaOH, extracting with Et2O, and evaporating the dried (K2CO3) exts. gave 4 g. II, m. 90-1° (Et2O-petr. ether); picrate m. 175-6° (EtOH). Adding dropwise in 10 min. at 15° 0.06 mole Et H malonate in 40 ml. C6H6 to 8.7 g. RH, 150 ml. C6H6, and 4 ml. C5H5N, stirring 2 hrs., keeping overnight at room temperature, decomposing with 50 ml. H2O, and evaporating the washed (H2O, N HCl, H2O) and dried (Na2SO4) C6H6 layer gave 98% RCOCH2CO2Et (XII), distilled with decomposition even at 0.2 mm.; similarly were prepared 64% RCO(CH2)2CO2Me, b0.5 230-2° (partial decomposition), and 98% RCO(CH2)4CO2Et, b0.2 248-50°. Adding dropwise with agitation 0.03 mole XII in 30-40 ml. tetrahydrofuran to 3 g. LiAlH4 in 120 ml. Et2O, refluxing the mixture 2 hrs., keeping overnight at room temperature, decomposing with 20% aqueous NaOH, extracting the organic layer with N HCl, alkalizing the extract with aqueous NaOH, extracting the base with Et2O, and distilling the dried (K2CO3) exts. gave 50% III, b1 208-9°; picrate m. 98-100° (60% EtOH). Analogously were prepared 82 % IV, b0.2 206-8° [picrate m. 111° (EtOH)], and 95% V, m. 68° (Et2O-petr. ether), b1 232-4°; HCl salt m. 117° (Me2CO). Keeping 24 hrs. at room temperature 0.03 mole I-V, 50 ml. C5H5N, and 0.036 mole powdered 3,4,5-(MeO)3C6H2COCl, evaporating the mixture in vacuo (bath temperature

L5 ANSWER 301 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
and dissolving the residue in 40 ml. H2O and 50 ml. EtOAc gave 2 layers; the org. layer was repeatedly extd. with the aq. layer which had been repeatedly adjusted to pH 9 with 5% aq. NaOH. The EtOAc layer was then sepd. and combined with the EtOAc washings of the aq. layer of const. pH 9, washed with H2O, dried with K2CO3, and evapd. in vacuo. The residue contg. 20-25% starting I-V was chromatographed on neutral Al2O3. The by-product, [3,4,5-(MeO)3C6H2CO]2O, was removed by elution with C6H6. Elution with C6H6 contg. 2-10% MeOH (the use of a higher concn. of MeOH led to coelution of the starting alcs.) gave then I-V, whose HCl salts were prepd. in Et2O and crystd. from Me2CO-Et2O: m. 76-8°, 75-8°, 75-6°, 125-6°, 115-16°, resp. For the prepn. of 3-indoleacetic acid (XIII) piperidide (XIV) 3 methods were used.
Treating 2.7 g. XIII carboxy chloride deriv. (XV) [prepd. from 4 g. XIII and PCl5 according to Shaw and Woolley (C.A. 48, 8794h)] in 40 ml. EtOAc with 2 ml. piperidine, 3.5 ml. N-ethylpiperidine, and 40 ml. EtOAc, keeping the mixt. 3 hrs. at room temp., filtering, washing with N HCl and 10% aq. Na2CO3, evapg., chromatographing the residue on Al2O3 (activity II), and eluting with 1:1 C6H6-Et2O gave 0.8 g. crude XIV. Adding slowly with agitation 2 g. piperidine, 2.3 g. Et3N, and 5 ml. Et2O to a mixt. contg. XV [prepd. from 4 g. XIII, SOCl2, and C5H5N according to Carr.acte.e and Libermann (C.A. 29, 17936)], keeping the mixt. 15 hrs. at room temp., decompg. with 200 ml. H2O, washing the Et2O layer with 10% Na2CO3 and 3N HCl, drying (Na2SO4), and evapg. gave 1.8 glassy XIV. Treating 6 g. XIII in 250 ml. Et2O with 3.1 g. C5H10NH in 20 ml. Et2O gave
9 g. XIII piperidine salt (XVI), m. 125-8° (EtOH-Et2O). Heating 7 g. XVI 3.5 hrs. at 190-215°, dissolving the melt in 100 ml. Et2O, washing with aq. K2CO3, aq. HCl, and H2O, and evapg. gave 5 g. crude XIV. Redn. (4 hrs. at room temp. and 30 min. at the boil) of 0.8 g. XIV (prepd.
by one of the 3 methods given) with 1.2 g. LiAlH4 in 50 ml. Et2O gave 0.8 g. VI, m. 161-2° (Et2O); HCl salt m. 228-9° (EtOH).
Reducing 30 hrs. in a Soxhlet app. 3 g. phenylacetic acid tryptamide with 4 g. LiAlH4 in 300 ml. Et2O, decompg. with 15 ml. 20% NaOH, evapg. the Et2O layer, crystg. the residue from EtOH to remove 0.3 g. starting material, and treating the filtrate with HCl-EtOH gave 1.3 g. VII HCl salt, m. 210-13° (H2O-EtOH). Redn. of 4 g. 1-oxo-1,2,3,4-tetrahydronorharman with 10 g. Na in 100 ml. abs. BuOH gave 2.6 g. VIII, m. 204-7° (80% aq. EtOH); HCl salt (XVII) m. 289° (H2O).
Refluxing 10 hrs. 11 g. VIII, 4.2 g. PhCH2Cl, and 500 ml. xylene, cooling,
filtering off the pptd. XVII, and evapg. the filtrate gave 6.2 g. IX, m. 142° (EtOH); HCl salt m. 246-8° (MeOH); methanesulfonate m. 258-61° (aq. EtOH). Treating analogously VIII with m-MeOC6H4CH2Cl and Me2NCH2CH2Cl, resp., gave X, m. 130-1° (MeOH) [HCl salt m. 246-9° (MeOH); methanesulfonate m. 109-11° (H2O)], and XI, m.p. not given; HCl salt m. 250-60° (EtOH-H2O); dimethiodide monohydrate m. 180-5° (aq. EtOH-MeI) (decompn.) (prepd. in Me2CO soln.). Paper chromatography of some N-methyltryptamino derivs. prepd. was carried out.
IT 7774-14-3P, Piperidine, 1-indol-3 ylacetyl-
RL: PREP (Preparation)
(preparation of)
RN 7774-14-3 CAPLUS

L5 ANSWER 301 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CN Piperidine, 1-(1H-indol-3-ylacetyl)- (9CI) (CA INDEX NAME)



L5 ANSWER 302 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1960:5831 CAPLUS
DOCUMENT NUMBER: 54:5831
ORIGINAL REFERENCE NO.: 54:1181h-i,1182a-b
TITLE: Paper chromatography of indole derivatives
AUTHOR(S): Prochazka, Z.; Sanda, V.; Macek, K.
CORPORATE SOURCE: Ceskoslov. akad. ved., Prague
SOURCE: Collection of Czechoslovak Chemical Communications (1959), 24, 2928-38
CODEN: CCCCAK; ISSN: 0010-0765
DOCUMENT TYPE: Journal
LANGUAGE: German
AB A series of neutral, acid, and basic indole derivs., were chromatographed by the descending technique (Rf values given) on (a) Whatman paper Number 4
in petr. ether-MeOH-H2O, CCl4-AcOH-H2O, iso-Pr2O-aqueous NH3, iso-PrOH-aqueous
NH3, and H2O-BuOAc (free of BuOH which considerably raises the Rf value), and (b) on Whatman paper Number 2 impregnated with HCONH2 in the solvents CHCl3-HCONH2, C6H6-HCONH2, and cyclohexane-HCONH2; detection was carried out with the formaldehyde reagent (a mixture of 1 part 30-40% aqueous HCHO, 1
part concentrated HCl, and 2 parts H2O), the Ehrlich reagent (1 g. p-Me2NC6H4CHO, 30 mL. EtOH, 30 mL. concentrated HCl, and 180 mL. BuOH), and the
Jaff.acte.e reagent (a freshly prepared mixture of 5 parts 3% ethanolic picric
acid and 1 part 10% aqueous NaOH), resp. A table is given of the group consts. of the Me, CH2, C:C, CHO, CO, COOH, COOMe, CONH2, CN, OH, and NH2 groups in various positions in the chain and in the rings for the calcn. of Rf values of indole derivs. in various solvent systems; some anomalies in the Rf values found are discussed especially with respect to the H bondings.
The described technique was successfully used in detecting indole derivs. in Brassica oleracea, Escherichia coli, and Chlorella and in the study of the decomposition of ascorbigen and 3-indolepyruvic acid under various conditions.
IT 100722-27-8, Indole-3-acetamide, N,N-diethyl-
(chromatog. of)
RN 100722-27-8 CAPLUS
CN 1H-Indole-3-acetamide, N,N-diethyl- (9CI) (CA INDEX NAME)

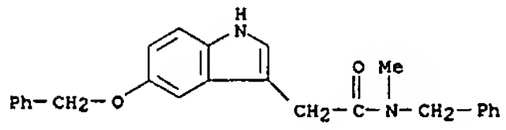


L5 ANSWER 303 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1956:89506 CAPLUS
DOCUMENT NUMBER: 50:89506
ORIGINAL REFERENCE NO.: 50:16869h-i,16870a-f
TITLE: (5-Benzyloxy-3-indole)alkylamines
PATENT ASSIGNEE(S): Upjohn Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

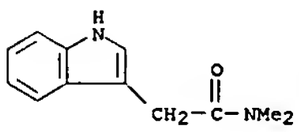
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 744773		19560215	GB 1953-8777	19530330

AB Compds. possessing vasoconstrictor properties are prepared by coupling a Grignard reagent prepared from Me2NCO(CH2)nCHRX (R = alkyl, X = halogen) with a 2-alkyl-5-benzyloxyindole giving a 2-alkyl-5-benzyloxy-3-indolealkanoylamide which is reduced to a 2-alkyl-5-benzyloxy-3-indolealkylamine. Thus to 4.25 g. 4.25 g. MeI and 2.4 g. Mg in 200 ml. Et2O was added 5.5 g. 5-benzyloxyindole in 200 ml. Et2O. After refluxing 30 min., cooling in ice and adding 5.9 g. of BzMeNCOCH2Cl in 500 ml. Et2O,
the Et2O was distilled off and the residue heated 3 hrs. on the steam bath,
taken up in Et2O, and decomposed with 5% AcOH, giving 7,5 g. N-methyl-N-benzyl-α-(5-benzyloxy-3-indolyl)acetamide (I), m. 151-2° (from iso-PrOH). I reduced with LiAlH4 in tetrahydrofuran gave after acidification with HCl, 71% 5-benzyloxy-3-[2-(N-benzyl-N-methylamino)ethyl]indole hydrochloride, C25H26N2O.HCl, m. 110-12°. Similarly were prepared the following 5-benzyloxy-3-R-substituted indoles (R, m.p., m.p. of hydrochloride, and % yield given): (PhCH2)2NCH2CH2, 101-2°, 232-3°, 65; Me2NCH2CH2, -, 154-5°, 29; 2-piperidinoethyl, -, 208-9.5°, 11.5; Bu2NCH2CH2, -, 218-20°, -; PhCH2(PhCH2CH2)NCH2CH2, -, 214-15°, -. Also prepared without phys. consts. given were 2-ethyl-5-benzyloxy-3-(2-piperidinoethyl)indole, 5-benzyloxy-3-(1-methyl-2-piperidinoethyl)indole, 5-benzyloxy-3-(2-morpholinoethyl)indole, 5-benzyloxy-3-[2-(1-pyrrolidinyl)ethyl]indole, 5-benzyloxy-3-(2-thiamorpholinoethyl)indole, 5-benzyloxy-3-(3-piperidinopropyl)indole, 5-benzyloxy-3-(1-ethyl-3-piperidinopropyl)indole, 5-p-methylbenzyloxy-3-[2-(N-benzylamino)ethyl]indole, 5-(p-propylbenzyloxy)-3-[2-(N-isopropyl-N-benzylamino)ethyl]indole, 2-methyl-5-(p-ethylbenzyloxy)-3-[2-(N-phenylamino)ethyl]indole, 5-(p,p'-dimethylbenzhydryloxy)-3-[2-(N-isopropylamino)ethyl]indole, 5-(p-ethylbenzyloxy)-3-[3-(N-benzylamino)propyl]indole, 5-(p-iodobenzyloxy)-3-[2-(N,N-dicyclohexylamino)ethyl]indole,
5-(p,p'-dichlorobenzhydryloxy)-3-[1-ethyl-2-(N-methyl-N-benzylamino)ethyl]indole, 5-(p,p'-dichlorobenzhydryloxy)-3-[3-(N-isopropylamino)propyl]indole, 5-(p-bromobenzyloxy)-3-[1-ethyl-3-(N-methylamino)propyl]indole, 5-(p-methoxybenzyloxy)-3-[2-(N,N-dicyclohexylamino)ethyl]indole, 5-(p,p'-dimethoxybenzhydryloxy)-3-[1-propyl-2-(N-ethyl-N-cyclohexylamino)ethyl]indole, 2-propyl-5-(p-ethoxybenzyloxy)-3-[2-(N-benzylamino)ethyl]indole, 5-(p,p'-dimethoxybenzhydryloxy)-3-[2-(N,N-dibenzylamino)ethyl]indole, 5-(p-ethoxybenzyloxy)-3-[1-ethyl-3-(N-benzylamino)propyl]indole, 5-benzyloxy-3-[3-(N-isopropylamino)propyl]indole, 5-benzyloxy-3-[3-(N,N-dimethylamino)propyl]indole, 5-benzyloxy-3-[3-(N-methyl-N-benzylamino)propylindole, 5-benzyloxy-3-[1-methyl-3-(N-benzylamino)propyl]indole, 2-ethyl-5-benzyloxy-3-[3-(N-benzylamino)propyl]indole, 5-benzhydryloxy-3-[2-(N-cyclopentyl-N-

L5 ANSWER 303 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
ethylamino)ethylindole, 5-benzhydryloxy-3-[1-ethyl-2-(N,N-diphenylamino)ethyl]indole, 2-methyl-5-benzhydryloxy-3-[2-(N-benzyl-N-methylamino)ethyl]indole, 5-benzhydryloxy-3-[3-(N-methyl-N-benzylamino)propyl]indole, 5-benzhydryloxy-3-[1-ethyl-3-(N-methylamino)propyl]indole, 5-benzyloxy-3-[1-methyl-2-(N-benzylamino)ethyl]indole, 2-methyl-5-benzyloxy-3-[2-(N,N-dicyclohexylamino)ethyl]indole, 5-benzyloxy-3-[2-(N-cyclohexylamino)ethyl]indole, 5-benzyloxy-3-[2-(N-methylamino)ethyl]indole, 5-benzyloxy-3-[3-(N-methyl-N-benzylamino)propyl]indole, and 5-benzyloxy-3-[1-methyl-3-(N-benzylamino)propyl]indole. Cf. Brit. 744,774 (following abstr.) and C.A. 50, 5035h.
IT 725227-53-2P, 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-methyl-
RL: PREP (Preparation)
(preparation of)
RN 725227-53-2 CAPLUS
CN 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-methyl- (5CI) (CA INDEX NAME)

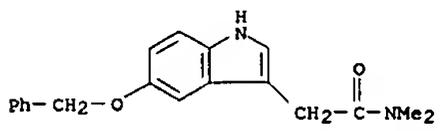


L5 ANSWER 304 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1956:77815 CAPLUS
DOCUMENT NUMBER: 50:77815
ORIGINAL REFERENCE NO.: 50:14708h-i,14709a
TITLE: Tertiary-amine oxide rearrangements
AUTHOR(S): Fish, M. S.; Johnson, N. M.; Horning, E. C.
CORPORATE SOURCE: Natl. Heart Inst., Bethesda, MD
SOURCE: Journal of the American Chemical Society (1956), 78, 3668-71
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
OTHER SOURCE(S): CASREACT 50:77815
AB cf. C.A. 50, 10703g. N,N-Dimethyltryptamine oxide (I), a naturally occurring indole base from Piptadenia macrocarpa seeds, undergoes a ferric ion-induced rearrangement in aqueous solution to give N-methyltryptamine (IA) and CH2O or HCO2H. The reaction, which provides a model for biol. N-dealkylation, was studied under a variety of conditions. No rearrangement resulted with Co(II), Ni(II), Cu, Mg, Mn, or Zn. 3-Indoleacetic acid (30.0 g.) by the method of Jackson (C.A. 25, 514) yielded 28.6 g. Me ester (IB), b0.9 160-3°. IB with LiAlH4 yielded 96% tryptophol (II), m. 59-60°. II (3.0 g.) yielded 81% 3-(2-bromoethyl)indole (III), m. 100-2°. III heated (sealed) with MeNH2 at 100° yielded 5-8% IA, 89-90°; picrate m. 193-5°. IB (16.0°), 100 cc. (CH2OH)2, and 19.4 g. Me2NH stirred 40 hrs. at room temperature, the mixture poured into 100 cc. water, extracted with 1:1 Et2O-EtOAc, and the solvent evaporated yielded 12.5 g. N,N-dimethyl-3-indoleacetamide (IV), m. 126-8°. Powdered IV (2.1 g.) added to 0.8 g. LiAlH4 in 50 cc. Et2O, and the mixture refluxed 4 hrs. yielded 1.6 g. I, m. 47-9°; another form m. 73-4°.
IT 91566-04-0P, 3-Indoleacetamide, N,N-dimethyl-
RL: PREP (Preparation)
(preparation of)
RN 91566-04-0 CAPLUS
CN 1H-Indole-3-acetamide, N,N-dimethyl- (9CI) (CA INDEX NAME)

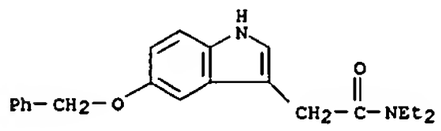


L5 ANSWER 305 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1956:27880 CAPLUS
DOCUMENT NUMBER: 50:27880
ORIGINAL REFERENCE NO.: 50:5630c-i,5631a-g
TITLE: Ergot alkaloids. XL. A new synthesis of bufotenine and related hydroxytryptamines
AUTHOR(S): Stoll, A.; Troxler, F.; Peyer, J.; Hofmann, A.
CORPORATE SOURCE: Sandoz, Basel, Switz.
SOURCE: Helvetica Chimica Acta (1955), 38, 1452-72
CODEN: HCACAV; ISSN: 0018-019X
DOCUMENT TYPE: Journal
LANGUAGE: German
OTHER SOURCE(S): CASREACT 50:27880
AB cf. preceding abstract Nitrosation of m-MeC6H4OH and oxidation of the NO compound give 63% 2,5-(O2N)(HO)C6H3Me, m. 129-30°, which is converted into 87% 2,5-(O2N)(PhCH2O)C6H3Me (I). Treating I mole I with 2 mol (CO2Et)2 and 2 mol EtOK according to Burton and Stoves (C.A. 32, 550.1) at below 8° gives 87% 2-nitro-5-benzyloxyphenylpyruvic acid, m. 112-13°, which (55 g.), reductively cyclized in 600 cc. H2O and 80 cc. 2N NaOH with 70 g. Na2S2O4 added in small portions until the color reaction (deep red) with NaOH is neg. and acidified with dilute HCl, gives 48.5% 5-benzyloxyindole-2-carboxylic acid (II), m. 194-6°. Heating II in quinaldine with Cu powder at 245-50° gives 80% 5-benzyloxyindole (III), m. 103-5°, which, shaken in MeOH with Pd-asbestos (IV) and H, gives 5-hydroxyindole, long needles, m. 107-8°. Treating III in 1:1 EtOH-AcOH with Me2NH and CH2O according to Ek and Witkop (C.A. 49, 12437i) gives 84% 5-benzyloxygramine (V), m. 138°. Adding (20 min.) with stirring 420 cc. MeI to 30 g. V, keeping the mixture 15 h. at 5°, heating the methiodide with 60 g. NaCN in 1.1 l. H2O 2 h. at 80°, extracting the solution with CHCl3, evaporating the CHCl3, taking up the residue (29.6 g.) in 250 cc. Et2O, and diluting the concentrated Et2O solution with petr. ether give 85% 5-benzyloxy-3-indoleacetonitrile (VI), prisms, m. 75-8°. Refluxing 20 g. VI in 140 cc. EtOH and 100 cc. H2O 15 h. with 45 g. KOH, acidifying the mixture with 60 cc. AcOH, and diluting the filtered solution with 500 cc. H2O give 20.6 g. 5-benzyloxy-3-indoleacetic acid, m. 145-7°, which is converted with CH2N2 into the Me ester and the latter heated with N2H4 1.5 h. at 135°, giving 95% 5-benzyloxy-3-indoleacethydrazide (VII), leaflets, m. 153-4°. Adding dropwise 60 cc. N HCl to a mixture of 14.7 g. VII in 250 cc. dioxane and 50 cc. N NaNO2 solution, extracting the acetazide with Et2O, evaporating the Et2O, and treating the residual azide with 50 g. anhydrous Me2NH 3 h. at 5° give 60% 5-benzyloxy-3-indoleacetdimethylamide (VIII), platelets, m. 138-40°. In a similar way the following addnl. amides are prepared: Me, short prisms, m. 141-2°; Et, prisms, m. 126-8°, di-Et, needles, m. 120-1°; H2NCH2CH2, plates, m. 137-9°; and piperidide, leaflets, m. 129-30°. Adding dropwise 1.26 g. LiAlH4 in 200 cc. Et2O in a N arm. to 3.65 g. VIII in 80 cc. THF, stirring the mixture 1 h. at 55°, and working it up in the usual way give 80% 5-benzyloxy-ω-N,N-dimethyltryptamine (bufotenine benzyl ether) (IX), pointed prisms, m. 87-9° [acid oxalate (X), fine leaflets, m. 177-8°]. Similar reduction of the corresponding amides gives the following N-substituted tryptamines: Me, plates, m. 84-6° [acid oxalate (XI), needles, m. 201-3°]; Et, crystals, m. 59-61° (acid oxalate, short needles, m. 187-9°) [the ω-N,N-diethyl homolog does not crystallize (acid oxalate, prisms, m. 162°)]; H2NCH2CH2, does not crystallize (bis-acid oxalate, leaflets, m. 221-2°); N-[β-(5-benzyloxy-3-indolyl)ethyl]piperidine, prisms, m. 136-8°. Shaking 3.45 g. IX in 75 cc. MeOH with 2 g. 5% IV and H 1.5 h. gives 78% bufotenine (XII), stout prisms, m. 138-40°. With FeCl3 in AcOH and concd. H2SO4, XII gives a reddish color, turning to blue after 1-2 s. The UV absorption curves of XII in EtOH, 0.1N HCl, and 0.1N NaOH, and the IR absorption curves of XII and of natural XII are given. Shaking 1.85 g. X in 200 cc. MeOH with IV in H gives 86% XII acid oxalate, needles, m. 89-90°. Treating 1.1 g. XII in 2 cc. MeOH with 2 cc. MeI 3 h. at 20° gives 1.7 g. XII methiodide, stout prisms, m. 214-15°. Dissolving 2.9 g. XII and 2.3 g. creatinine sulfate (XIII) in 14 cc. N H2SO4 and 40 cc. boiling H2O and dilg. the soln. with Me2CO give a 5.3 g. XII-XIII complex, fine needles, m. 147-9°. Debenzylation of XI gives 5-hydroxy-ω-N-methyltryptamine (ω-N-methylserotonin), short pointed prisms and plates, m. 153-6°; N-Et homolog, short prisms, m. 239-40°; N,N-di-Et homolog, polyhedrons and prisms, m. 147-9° (oxalate, m. 230-2°); N-H2NCH2CH2 analog, bis-acid oxalate, leaflets, m. 208-9°; N-[β-(5-hydroxy-3-indolyl)ethyl]piperidine, stout prisms, m. 201-3° (oxalate, pointed prisms, m. 243-7°). Refluxing 30.6 g. 2,6-O2N(HO)C6H3Me in 150 cc. EtOH contg. 4.6 g. Na 8 h. with 25.4 g. PhCH2Cl, adding H2O, distg. off the EtOH in vacuo, and extg. with Et2O give 63.8% 2,6-O2N(PhCH2O)C6H3Me (XIV), b0.8 170-6°, m. 65-6°. Condensation of XIV with (CO2Et)2 in the presence of EtOK gives the 2-nitro-6-benzyloxyphenylpyruvic acid which is directly converted into 64% (overall) 4-benzyloxy-2-indolecarboxylic acid (XV) (purified via its Na salt), m. 241-2°. Decarboxylation of XV in quinaldine in the presence of Cu powder gives 62% 4-benzyloxyindole (XVI), needles, m. 72-4°, which, treated in MeOH with H in the presence of IV, gives 4-hydroxyindole, hexagonal plates, m. 97-9°. Treating XVI with Me2NH in the same way as in the prepn. of V gives 89% 4-benzyloxygramine (XVII), hexagonal leaflets, m. 94-8°. Treating the methiodide of XVII with NaCN gives 60% 4-benzyloxy-3-indoleacetonitrile, m. 97-100°, which, reduced with LiAlH4, gives 81% 4-benzyloxytryptamine, plates, m. 117-20° [acid oxalate (XVIII), hexagonal plates, m. 188-9°]. Shaking 3.3 g. XVIII in 270 cc. MeOH with Pd and H gives 4-hydroxytryptamine (XIX) oxalate, clusters of platelets, m. 269-70°; free base does not crystallize. XIX-XIII complex, needles, m. 250-5°. Condensation of 121.5 g. 2,4-O2N(PhCH2O)C6H3Me with (CO2Et)2 gives 91% 2-nitro-4-benzyloxyphenylpyruvic acid, m. 133-5° (B. and S. (loc. cit.) found 89-90°), which is converted into 51% 6-benzyloxy-2-indolecarboxylic acid (XX), m. 199-200° (decompn.). Decarboxylation of XX gives 46% 6-benzyloxyindole, leaflets, m. 118-20°, which, with Pd and H in MeOH, gives 6-hydroxyindole (XXI), hexagonal leaflets, m. 124-6°. XXI is converted into 80% 6-benzyloxygramine (XXII), long rods, m. 136-8°. Converting XXII into the methiodide and treating the latter with NaCN give 75% 6-benzyloxy-3-indoleacetonitrile, leaflets, m. 136-7°, which, reduced with LiAlH4 in THF, gives 71% 6-benzyloxytryptamine (XXIII), fine needles, m. 92-6° (oxalate, shiny leaflets, m. 260-5°). XXIII, debenzylated with Pd and H, gives 6-hydroxytryptamine (XXIV) which does not crystallize. XXIII is converted into its sulfate and the latter (1.4 g.) is shaken in 500 cc.

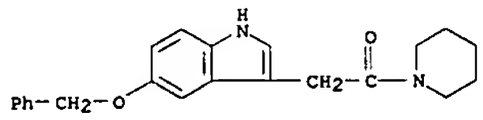
L5 ANSWER 305 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
H2O with 500 mg. IV and H, the filtrate concd. to 100 cc., and 0.72 g. XIII added, giving 85% XXIV-XIII complex, fine needles, m. 212-15°. The UV and IR absorption max. of some of the compds. are given.
IT 409111-49-5P, 3-Indoleacetamide, 5-(benzyloxy)-N,N-dimethyl-
857764-35-3P, 3-Indoleacetamide, 5-(benzyloxy)-N,N-diethyl-
872786-56-6P, Piperidine, 1-[[5-(benzyloxy)-3-indolyl]acetyl]-
RL: PREP (Preparation)
(preparation of)
RN 409111-49-5 CAPLUS
CN 1H-Indole-3-acetamide, N,N-dimethyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)



RN 857764-35-3 CAPLUS
CN 3-Indoleacetamide, 5-(benzyloxy)-N,N-diethyl- (5CI) (CA INDEX NAME)



RN 872786-56-6 CAPLUS
CN Piperidine, 1-[[5-(benzyloxy)-3-indolyl]acetyl]- (5CI) (CA INDEX NAME)

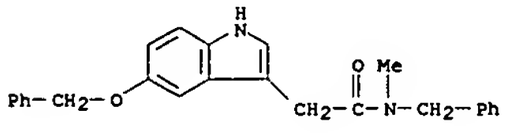


L5 ANSWER 306 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1956:24396 CAPLUS
DOCUMENT NUMBER: 50:24396
ORIGINAL REFERENCE NO.: 50:5035h-i,5036a-d
TITLE: (Hydroxy-3-indolyl)alkylamines
INVENTOR(S): Speeter, Merrill E.
PATENT ASSIGNEE(S): Upjohn Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2708197		19550510	US 1952-289872	19520524

AB (Hydroxy-3-indolyl)alkyl amines are synthesized by the debenzylation of (benzyloxy-3-indolyl)alkylamines (I) prepared by the reduction of (benzyloxy-3-indolyl)alkanoyl amides (II) with Li-AlH4. II are prepared by the Grignard reaction from benzyloxyindole with a haloalkanoyl amide. Thus, a Grignard reagent made from 4.25 g. MeI and 2.4 g. Mg in 200 mL. ether treated with 5.5 g. 5-benzyloxyindole in 200 mL. ether, the mixture refluxed 30 min., cooled in an ice bath, 5.9 g. ClCH2CONMeCH2Ph in 200 mL. ether added, the mixture stirred, the ether distilled off, the residue warmed 3 h. on the steam bath, cooled, 500 mL. ether added, then 5 mL. AcOH in 95 mL. water, and the precipitate allowed to stand overnight and recrystd. from iso-PrOH, yielded 7.5 g. 5-benzyloxy-N-benzyl-N-methyl-3-indoleacetamide (III), m. 151-2°. III (3.84 g.) in 150 mL. THF added with stirring to 3.7 g. LiAlH4 in THF, the mixture refluxed 0.5 h., concentrated to 75 mL., diluted with 500 mL. ether, 50 mL. 5% NaOH added, the ether layer decanted, the water layer reextd. with ether, dilute HCl added to the combined ether layers, and the white precipitate filtered, washed with ether, and recrystd. from EtOH yielded 2.9 g. 5-benzyloxy-3-[2-(benzyl-methylamino)ethyl]indole-HCl (IV), m. 110-12°. A suspension of 2.64 g. IV in 100 mL. H2O treated with 25 mL. 10% NaOH, then 200 mL. ether, the mixture stirred until all the solid dissolved, the ether layer decanted, 3 more extns. with 200-mL. portions of ether made, the exts. washed with H2O, dried over K2CO3, the ether distilled off, the residue dissolved in 25 mL. absolute EtOH, transferred to a microredn. flask, 0.5 g. 10% Pd-C catalyst added, the mixture shaken with H at a little higher than atmospheric pressure at 25° (the H consumption was complete in 0.5 h.), the catalyst filtered off, 13 mL. 0.5N H2SO4 added, the solution concentrated to 5 mL., 1.13 g. creatinine sulfate in 10 mL. H2O added, the resulting pink solution filtered (the rinsings brought the volume to 30 mL.), the solution heated to 60°, 80 mL. acetone added, and the precipitate filtered, dried, and recrystd. from

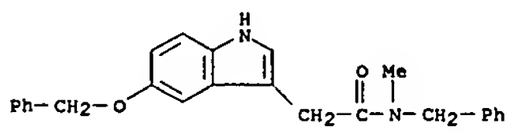
L5 ANSWER 306 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
water-acetone yielded 1.3 g. 5-hydroxy-3-(2-methylaminoethyl)indole creatinine sulfate, m. 220-1°. Similarly were synthesized the following 3-substituted-5-hydroxyindole HCl salts (A) and creatinine sulfates (B) (substituent and m.p. given): Me2NCH2CH2 (B), 141-3°; 2-piperidinoethyl (A), 246-8°; Bu2NCH2CH2 (A), 213-14°; also 2-methyl-5-hydroxy-3-(2-aminoethyl)indole-HCl, m. 225.5-7.0°. In similar reactions with ClCH2CN in place of the haloalkanoyl amides were synthesized 5-benzyloxytryptamine-HCl, m. 248-50° (decompn.), and serotonin creatinine sulfate, m. 215-16°. The compds. have potent vasoconstrictor qualities.
IT 725227-53-2P, 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-methyl-
RL: PREP (Preparation)
(preparation of)
RN 725227-53-2 CAPLUS
CN 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-methyl- (5CI) (CA INDEX NAME)



L5 ANSWER 307 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1955:78071 CAPLUS
DOCUMENT NUMBER: 49:78071
ORIGINAL REFERENCE NO.: 49:14810g-i,14811a
TITLE: (5-Benzyloxy-3-indolyl)alkanamides
INVENTOR(S): Speeter, Merrill E.
PATENT ASSIGNEE(S): Upjohn Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

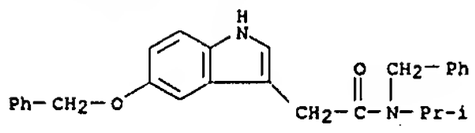
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2692882		19541026	US 1952-279931	19520401

GI For diagram(s), see printed CA Issue.
AB I (X is Ph, halophenyl, lower alkoxyphenyl, or lower alkylphenyl; Y is H, Ph, halophenyl, lower alkoxyphenyl, or lower alkylphenyl; R' and R'' are H or lower alkyl; n is 0 or 1; and Z is a secondary amine radical) are prepared by the following exemplary procedure. A Grignard reagent prepared from 4.25 g. MeI and 2.4 g. Mg in 200 ml. Et2O added to 5.5 g. 5-benzyloxyindole in 200 ml. Et2O, the solution refluxed 30 min., cooled in an ice-bath, 5.9 g. ClCH2CONMeCH2Ph in 200 ml. Et2O added, the mixture stirred, the Et2O distilled off, the residue warmed 3 hrs. on a steam bath, cooled, about 500 ml. Et2O added, then, with vigorous stirring, 5 ml. AcOH and 95 ml. H2O, the mixture allowed to stand overnight, and the product filtered and recrystd. gives 7.5 g. 2-(5-benzyloxy-3-indolyl)-N-benzyl-N-methylacetamide, m. 151-2° (from iso-PrOH). Similarly prepared: in 69% yield, the N,N-di-PhCH2 analog, m. 156-7°; and in 30% yield, 2-(5-benzyloxy-3-indolyl)benzylacetamide, m. 185-6°.
IT 725227-53-2P, 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-methyl-
857776-54-6P, 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-isopropyl- 857776-60-4P, 3-Indoleacetamide, N,N-dibenzyl-5-(benzyloxy)- 872786-56-6P, Indole, 5-(benzyloxy)-3-(piperidinocarbonylmethyl)-
RL: PREP (Preparation)
(preparation of)
RN 725227-53-2 CAPLUS
CN 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-methyl- (5CI) (CA INDEX NAME)

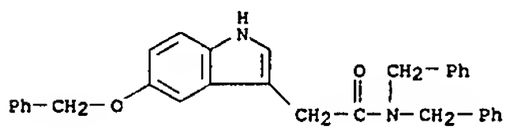


RN 857776-54-6 CAPLUS
CN 3-Indoleacetamide, N-benzyl-5-(benzyloxy)-N-isopropyl- (5CI) (CA INDEX NAME)

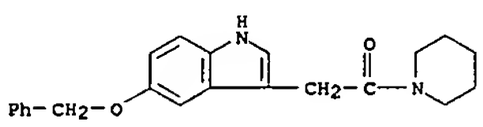
L5 ANSWER 307 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)



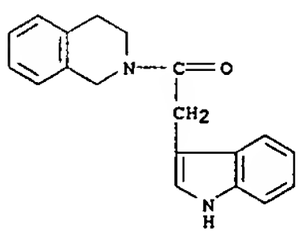
RN 857776-60-4 CAPLUS
CN 3-Indoleacetamide, N,N-dibenzyl-5-(benzyloxy)- (5CI) (CA INDEX NAME)



RN 872786-56-6 CAPLUS
CN Piperidine, 1-[[5-(benzyloxy)-3-indolyl]acetyl]- (5CI) (CA INDEX NAME)



L5 ANSWER 308 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
RN 855691-05-3 CAPLUS
CN Isoquinoline, 1,2,3,4-tetrahydro-2-(3-indolylacetyl)- (5CI) (CA INDEX NAME)



L5 ANSWER 308 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1954:49482 CAPLUS
DOCUMENT NUMBER: 48:49482
ORIGINAL REFERENCE NO.: 48:8794h-i,8795a-c
TITLE: Yohimbine and ergot alkaloids as naturally occurring antimetabolites of serotonin
AUTHOR(S): Shaw, Elliott; Woolley, D. W.
CORPORATE SOURCE: Rockefeller Inst., New York, NY
SOURCE: Journal of Biological Chemistry (1953), 203, 979-89
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB cf. C.A. 47, 10733i. Yohimbine (I), an analog of serotonin (II), was highly active in tests for antimetabolites of II with segments of carotid artery. The antagonism held over a large range of concentration A graded series of compds. analogous to II and progressively more similar to I (cf. C.A. 48, 4512b) was synthesized. 3-(2-Chloroethyl)-5-nitroindole (1.25 g.) and 3 cc. 1,2,3,4-tetrahydroisoquinoline (III) in 65 cc. absolute EtOH refluxed 20 hrs., filtered, the filtrate concentrated in vacuo, and the residue triturated with 3N HCl yielded 410 mg. 3-[2-(1,2,3,4-tetrahydro-2-isoquinolyl)ethyl]-5-nitroindole-HCl (IV), m. 247-8°. IV (0.30 g.) in 50 cc. warm EtOH reduced with alkaline hydrosulfite, the alc. removed, and the base treated with picric acid yielded 0.37 g. 3-[2-(1,2,3,4-tetrahydro-2-isoquinolyl)ethyl]-5-aminoindole dipicrate, m. 215-17°; the di-HCl salt was prepared for testing. Indoleacetic acid (2.0 g.) in 50 cc. Et2O treated at 0° with 2.7 g. PCl5, the solution concentrated in vacuo to 20 cc. and diluted with 200 cc. petr. ether yielded 1.45 g. acid chloride (V), m. 68°. V in 25 cc. EtOAc mixed with 1.5 cc. III and 2 cc. 4-ethylmorpholine in 25 cc. EtOAc, the mixture let stand 3 hrs. at room temperature, filtered, the amide (1.1 g.) in 200 cc. Et2O treated with 1.1 g. LiAlH4, the mixture stirred 4 hrs., decomposed with water, then with 50 cc. 10% NaOH, the base extracted with 0.1N HCl and the HCl salt treated with picric acid yielded 1.45 g. 3-[2-(1,2,3,4-tetrahydro-1-quinolyl)ethyl]indole picrate, m. 167-9°. Most of the compds. were active as antimetabolites of II and formed a closely related series, which included harman and 6-aminoharman. These and other naturally occurring harman alkaloids may owe a portion of their pharmacol. properties to interference with II but the entire pharmacol. action of I and the ergot alkaloids is not due to their action as antimetabolites of II. Ergotamine and ergotoxine inhibit the action of II on artery rings and II reverses the action.

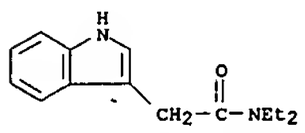
IT 855691-05-3P, Indole, 3-[3,4-dihydro-2(1H)-isoquinolylcarbonyl)methyl]-
RL: PREP (Preparation)
(preparation of)

L5 ANSWER 309 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1938:6240 CAPLUS
DOCUMENT NUMBER: 32:6240
ORIGINAL REFERENCE NO.: 32:939e-g
TITLE: Diethylamide of the indole-3-carboxylic acid, β-indole-acetic acid, thionaphthene-3-carboxylic acid, and of the hydrogenated β-indolylacetic acid
AUTHOR(S): Wegler, Richard; Binder, Hans
SOURCE: Arch. Pharm. (1937), 275, 506-16
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The following compds. were prepared and characterized: di-ethylamide of indolyl-3-carboxylic acid by interaction of Mg, MeI and indole, thereupon treatment of the resulting indolylmagnesium iodide with Et2NCOCl, C13H16ON2, m. 151-1.5° (picrate m. 129.5-30°); diethylamide of thionaphthene-3-carboxylic acid, C13H15ONS, oil, b11 220°; amide of indole-3-carboxylic acid, m. 200°; diethylamide of β-indolylacetic acid, C14H18ON, m. 101° (picrate m. 139-40°); β-indolylacetamide; diethylamide of 2,3-dihydro- and octahydro-3-indolylacetic acid (picrate of the dihydro compound m. 170-2°; salt of 2-nitro-1,3-diketohydrindene, yellow, m. 184°); picrate of the octahydro compound yellow, m. 177-8.5°); diethylamide of N-nitrosoindolyl-3-carboxylic acid, C13H15O2N3, m. 241-2°; diethylamide of N-aminoindolyl-3-carboxylic acid, C13H17ON3 m. 177.5-8°.

IT 100722-27-8P, 3-Indoleacetamide, N,N-diethyl- 859965-26-7P, 3-Indoleacetamide, N,N-diethyl-, picrate
RL: PREP (Preparation)
(preparation of)

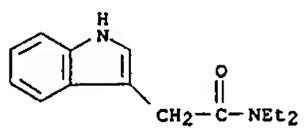
RN 100722-27-8 CAPLUS
CN 1H-Indole-3-acetamide, N,N-diethyl- (9CI) (CA INDEX NAME)



RN 859965-26-7 CAPLUS
CN 3-Indoleacetamide, N,N-diethyl-, picrate (4CI) (CA INDEX NAME)

CM 1

CRN 100722-27-8
CMF C14 H18 N2 O



L5 ANSWER 309 OF 309 CAPLUS COPYRIGHT 2007 ACS on STN (Continued)
CM 2

CRN 88-89-1
CMF C6 H3 N3 O7